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Boulder Distribution Analysis of Impact Craters in the Tharsis Region and Elysium Planitia, Mars

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BOULDER DISTRIBUTION ANALYSIS OF IMPACT CRATERS IN THE THARSIS REGION AND ELYSIUM PLANITIA, MAR

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Abstract

Crater counting is an accepted method for dating the surface of a planetary body. An older landscape will have a higher areal density of craters due to exposure of impacts occurring over a longer time period. Since each initial impact only forms one primary crater, secondary craters need to be excluded in the crater counting method to appropriately catalog only distinct impact events. However, small primary craters may be difficult to distinguish from secondary craters. Understanding physical features of impact craters, such as the ejecta blanket, would improve the planetary community's ability to differentiate between the two types of craters. Boulder distribution analysis of individually measured boulders in an ejecta blanket includes the comparison of a boulder's area to its distance from the crater, the comparison of a boulder's axial ratio to its distance from the crater, and the cumulative size frequency distribution. Krishna and Kumar (2016) applied boulder distribution analysis to Censorinus Crater on the Moon. Through cumulative size frequency distribution and power-law fit to calculate the largest negative b-value, they determined the impact direction. On Mars, boulder distribution analysis has yet to be applied to impact craters observed in high resolution images. This study investigated two Martian impact craters using boulder distribution and improved the technique of previous boulder distribution studies by incorporating error propagation. These craters were: 1. a speculated primary crater located in the Tharsis region that was approximately 175 m in diameter (Banks, 2008), and 2. a speculated secondary crater located in Elysium Planitia that was approximately 320 m in diameter (Hart & Gulick, 2010; McEwen et al., 2005). Variations and similarities between the two types of craters on the Martian surface could provide insight about the typical boulder distribution for each crater type and the impact direction. For a secondary crater, the impact direction may indicate its associated primary crater. At these two Martian impact craters, the power-law fit to the cumulative

size distribution frequency, boulder population density, and presence of a forbidden zone, defined as a region where ejecta is absent or nearly absent for an oblique impact, did not conclusively indicate the impact direction of either crater. While this study serves as a starting point for understanding the boulder distribution patterns around small Martian primary and secondary craters, it also motivates future work to determine whether the impact direction is indeterminable for small craters and to establish a database of Martian primary and secondary craters for which boulder distribution was applied.

1. Introduction

Craters play an important role in determining the age of a planetary surface (Fassett, 2016; McEwen & Bierhaus, 2006; Robbins & Hynek, 2011a). Older terrain on a planetary body is expected to have a higher areal density of craters relative to a newly formed surface (Hartmann & Neukum, 2001; Robbins & Hynek, 2014), such as resurfacing from volcanic activity, since craters form randomly in time across a planetary body (Robbins & Hynek, 2014). However, secondary craters can form on a planetary body following the initial impact when the velocity of the ejecta is high enough (McEwen & Bierhaus, 2006). The term velocity is used throughout this study because the impact direction is a key component of the impact crater formation, particularly with the formation of secondary craters.

Robbins and Hynek (2011b) define secondary craters as typically having one or more of the following properties: 1. clustered within troughs that extend radially from the primary crater or adjacent to the primary crater (McEwen & Bierhaus, 2006; Robbins & Hynek, 2014), 2. highly asymmetric (McEwen & Bierhaus, 2006) or biaxial symmetry with one of the symmetry axes pointing to the primary crater, and 3. presence of a herring-bone ejecta pattern that points to the primary crater (Hargitai & Kereszturi, 2015; McEwen & Bierhaus, 2006). Secondary craters of large impact craters have been discovered thousands of kilometers from the associated primary crater (Preblich et al., 2007; Robbins & Hynek, 2011a, 2014). Smaller distant craters are referred to as “background secondaries” (Robbins & Hynek, 2011b, 2014). In addition, secondary craters typically have a shallower depth than a primary crater of the same size due to the lower impact velocity (McEwen et al., 2005; McEwen & Bierhaus, 2006; Melosh, 1984; Robbins & Hynek, 2011b). The lower impact velocity associated with secondary craters also produces larger boulders

than primary craters of the same size (Gwendolyn D. Bart & Melosh, 2007). Table 1 presents the differences between primary and secondary craters of similar size.

Table 1. Characteristics of primary and secondary craters compiled from Bart and Melosh (2007), McEwen and Bierhaus (2006), Robbins and Hynek (2011b, 2014), and Robbins et al. (2017).

Characteristic	Primary Crater	Secondary Crater
Depth (equal diameters)	Deeper	Shallower
Boulder size	Smaller	Larger
Location	Across a planetary body	Usually clustered adjacent to a primary crater or within troughs that extend radially from a primary crater
Additional Characteristics		Presence of a herring-bone ejecta pattern that points to the primary crater Highly elliptical crater with the long axis pointing towards a primary crater Crater rim may be absent in the uprange direction

Secondary craters produced from the same primary crater form in the same geologic instant as the initial impact and are spatially distributed around a central source (Robbins & Hynek, 2014). Since impacts forming secondary craters are not independent events, secondary craters can contaminate the primary crater population in crater counting and affect the results of dating a planetary body through this method (Gwendolyn D. Bart & Melosh, 2007; Bierhaus et al., 2005, 2012; Calef et al., 2009; McEwen & Bierhaus, 2006; Robbins et al., 2014; Robbins & Hynek, 2011a, 2014; Werner et al., 2009; Xiao, 2016; Xiao & Strom, 2012).

Zunil Crater is a large primary crater located at 7.69°N, 166°E that produced approximately 10^7 secondary craters, some up to 1600 km away (McEwen et al., 2005). It was the first rayed crater discovered on Mars using the Thermal Emission Imaging System (THEMIS) onboard the

2001 Mars Odyssey orbiter (Christensen et al., 2004; McEwen et al., 2005). Tornabene et al. (2006) subsequently identified additional rayed craters on Mars also using THEMIS. The expansiveness of secondary craters across Mars produced from Zunil Crater demonstrates the high probability of secondary crater contamination in primary crater counts. Using THEMIS and the Mars Orbital Camera (MOC) onboard the Mars Global Surveyor (MGS), Preblich et al. (2007) mapped and imaged the rays and some secondary craters of Zunil Crater. MOC images have a resolution of 3.1 m/pixel. Preblich et al. (2007) indicated that the High Resolution Imaging Science Experiment (HiRISE) onboard the Mars Reconnaissance Orbiter (MRO) would improve the investigation of small craters on Mars. Since September 2006, HiRISE has been imaging the surface of Mars with a resolution of approximately 0.3 m/pixel (McEwen et al., 2005, 2007).

Boulder fields at impact craters are easily observable on planetary bodies with high resolution imagery – Meteor Crater on Earth, Censorinus Crater on the Moon (Krishna & Kumar, 2016), and rayed craters on Mars. As demonstrated by Krishna and Kumar (2016) in their investigation of Censorinus Crater, clues about a crater's formation, such as impact direction, can be revealed through the measurement of individual boulders and the application of boulder distribution analysis. Some of the properties Krishna and Kumar (2016) investigated with boulder distribution analysis included boulder area, axial ratio, and cumulative size frequency distribution. Boulder distribution analysis is applicable to boulder fields around impact craters on other planetary body (Alpert & Melosh, 1999; G. D. Bart & Melosh, 2010; Gwendolyn D. Bart & Melosh, 2007, 2010; Bierhaus et al., 2012; Cameron & Coyle, 1971; Cintala & McBride, 1994; Craddock et al., 2000; Di et al., 2016; Hartmann, 1969; Jones et al., 2016; Li et al., 2017a; Mcgetchin et al., 1973; Mouginis-mark & Garbeil, 2007; Orloff et al., 2013; Osinski et al., 2011; Pajola et al., 2015, 2017; Singer et al., 2013; Thomas et al., 2000; Vickery, 1987). Here, I

investigated two Martian impact craters (Figure 1), termed informally as “Impact Crater 1” and “Impact Crater 2.” Both craters have visible darks rays and ejecta consistent with other rayed craters observed on Mars in HiRISE images (Calef et al., 2009; M. P. Golombek et al., 2014).

Impact Crater 1 is a small rayed crater, interpreted to be a primary crater, with a diameter of approximately 175 meters located in the Tharsis region at 17.41°N, 248.75°E (Banks, 2008; West et al., 2010), as shown in Figure 1. If Impact Crater 1 were a secondary crater, a large, an order of magnitude larger in diameter) associated primary craters would need to be present nearby, as described for Impact Crater 2. Since no potential associated primary craters are observed, Impact Crater 1 is assumed to be a primary crater itself. At the Henbury Meteorite Craters in the Northern Territory of Australia, some craters provide a terrestrial analog for Impact Crater 1 in terms of size and visible rays surrounding the crater. One of the Henbury Meteorite Craters has ejecta easily identifiable in the downrange direction (Milton & Michel, 1977; West et al., 2010). Impact Crater 1 has rays visible in all radial directions. The terrain in which Impact Crater 1 formed is classified as an Amazonian and Hesperian volcanic unit, AHv (Tanaka, Robbins, et al., 2014; Tanaka, Skinner, et al., 2014). The Hesperian period lasted from 3.7 – 3.0 Gya was followed by the Amazonian period. Although I do not discuss older terrain, the Pre-Noachian and Noachian time periods preceded the Hesperian period (Carr & Head, 2010). Lowe and Byerly (2015) presented two large terrestrial impacts at 3.29 Gya and 3.23 Gya that suggested that large asteroids (20 – 70+ km in diameter) impacted the Earth as late as 3.2 Gya. Previous lunar studies suggested that this heavy bombardment ended around 3.8 – 3.7 Gya. If similar bombardment occurred on Mars, large impacts would have occurred until almost the end of the Hesperian and would have created a disproportionate number of secondary craters as compared to the most recent Martian time period.

Impact Crater 2 is a slightly larger impact crater with a diameter of ~320 m and is located in Elysium Planitia at 0.51°N, 163.14°E (Figure 1). The terrain in which Impact Crater 2 formed is classified as a late Amazonian volcanic unit, IAv (Tanaka, Robbins, et al., 2014; Tanaka, Skinner, et al., 2014), indicating that it is slightly younger than Impact Crater 1. Located approximately 450 km to the southwest of Zunil Crater, Impact Crater 2 may be a secondary crater of Zunil Crater (Hart & Gulick, 2010) since it meets the requirements stated by McEwen et al. (2005).

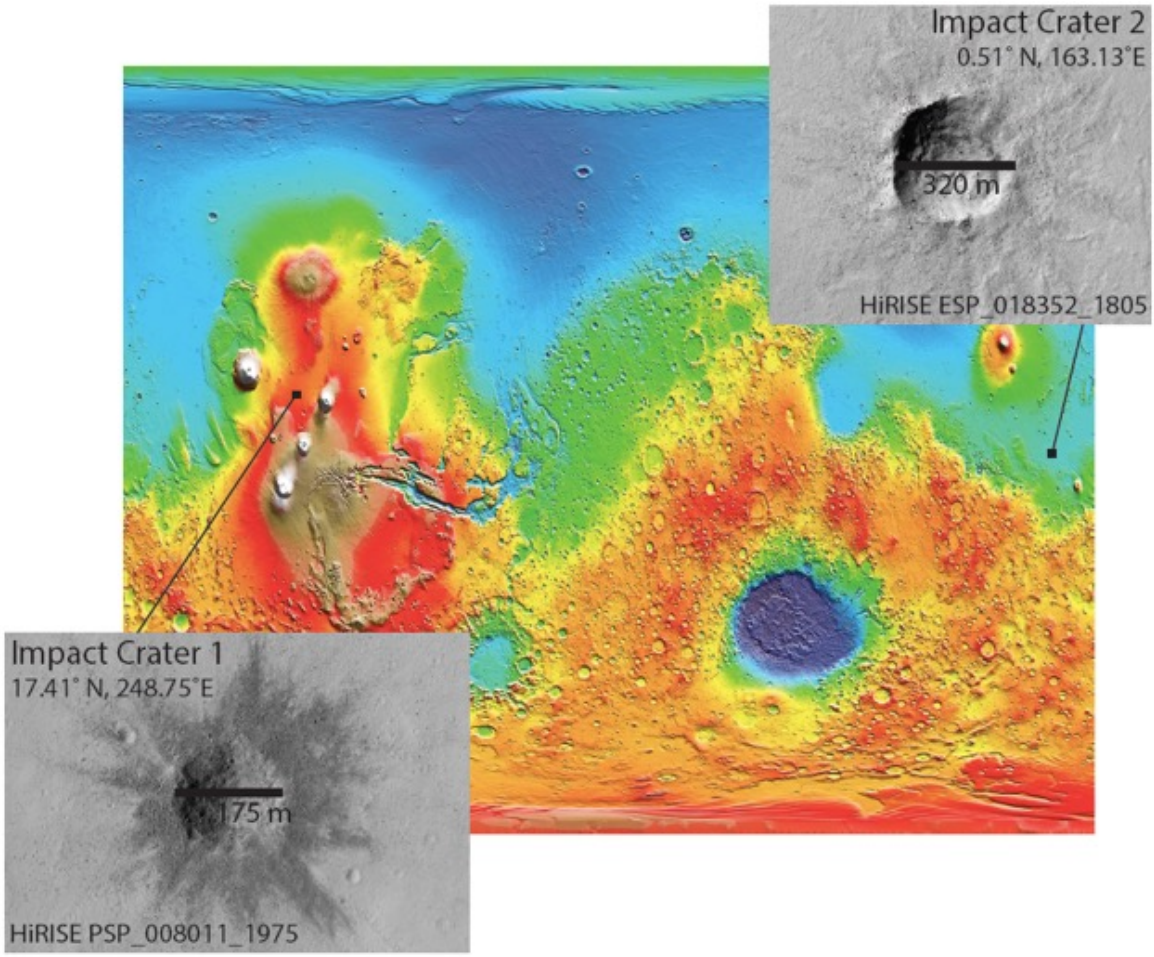


Figure 1. Locations of Impact Crater 1 and Impact Crater 2 shown on a Mars Orbiter Laser Altimeter (MOLA) map, available from NASA. Impact Crater 1 has a diameter of 175 m and Impact Crater 2 has a diameter of 320 m. Both impact craters were imaged with the High Resolution Imaging Science Experiment (HiRISE) onboard the Mars Reconnaissance Orbiter (MRO). The HiRISE images are from https://hirise.lpl.arizona.edu and were subsequently used in HiView.

Secondary craters of Zunil Crater larger than 50 m are located within 800 km of Zunil Crater (McEwen et al., 2005). Identification of the impact direction using boulder distribution analysis could assist with definitively identifying Impact Crater 2 as a secondary crater of Zunil Crater if the impact direction was determined to originate from the direction of Zunil Crater.

This study is one of the first applications of boulder distribution analysis to Martian impact craters. Several studies (Krishna & Kumar, 2016; Mazrouei & Ghent, 2017; Watkins et al., 2017) focused on lunar craters that are several kilometers in diameter. At some large lunar craters, it is impractical to measure all the surrounding boulders (Mazrouei & Ghent, 2017). With measurements of all boulders surrounding these two Martian impact craters, my dataset is more complete than the lunar craters at which only a subset of boulders were measured. In addition to the differences in crater size and percentage of measured boulders, the planetary community lacks a standard for boulder measurements and area calculations of a boulder (Krishna & Kumar, 2016; Mazrouei et al., 2014; Mazrouei & Ghent, 2017; Sholes et al., 2017; Watkins et al., 2017). Lastly, my study expands on previous boulder distribution analyses by incorporating the statistical analysis error propagation. Boulder distribution analysis of Impact Craters 1 and 2 provides new insight about Martian impact craters and expands the planetary community's knowledge of primary and secondary craters.

2. Methods

Using HiRISE images, boulders within ejecta blankets surrounding two Martian impact craters were measured (Figure 1). HiRISE images have a resolution of approximately 0.3 m/pixel and objects at least 1 meter in length are distinguishable from one another (McEwen et al., 2005, 2007). Therefore, the minimum area for a measured boulder in this study was 1 m^2. One program for viewing and analyzing HiRISE images is HiView, which was developed and is maintained by the University of Arizona. HiView was optimal for this study because it is specifically designed for viewing HiRISE images at their full resolution and is available at no cost to anyone in the world, even those with limited bandwidth, at https://www.uahirise.org/hiview/. In addition, since the use of HiView does not require GIS software skills, all researchers are able to immediately implement this software into their study as well as engage other groups, including K-12 students, through outreach to participate in a research study. Lastly, the availability of this program allows future studies to produce results that are directly comparable to those in this study or to replicate my results if necessary.

The HiRISE image PSP_008011_1975 contains Impact Crater 1 and its ejecta field and has a resolution of 0.25 m/pixel. The HiRISE image ESP_018352_1805 contains Impact Crater 2 and its ejecta field and has a resolution of 0.50 m/pixel. The crater centers were determined by locating the point inside the crater that is approximately one crater radius from the crater rim in any given direction. Figure 2 provides an example of a boulder measured at Impact Crater 1 using HiView.The larger image represents the resolution of the boulders during measurement, which was optimal to prevent blurring of the individual boulders and to provide context of the impact crater and its rays. Due to constraints in HiView and to facilitate comparisons across planetary bodies and prior work (e.g. Krishna and Kumar (2016) and Li et al. (2017b)), two perpendicular

axes were measured for each boulder, referred to as length and width. However, HiView limited the perpendicular axes to be measured only in the north-south and east-west directions, whereas Krishna and Kumar (2016) used perpendicular axes that aligned with the longest and shortest axes. In this study, the axial ratio is defined as the longest axis divided by the shortest axis. As described in more detail in the following paragraphs, these two boulder measuring techniques produced different axial ratios. In Figure 2, the white box around the boulder (present in both the larger image and the inset) demonstrates the length and width measurements of the boulder in the north-south and east-west directions. The dimensions of each side of the box were automatically provided and subsequently recorded in a spreadsheet (Appendix: Raw Data). The latitude and longitude were obtained using the function "copy coordinates" and recorded in the same spreadsheet (Appendix: Raw Data). These measurements were conducted for all boulders in the ejecta blanket to a distance approximately 3-4 times the diameter of the crater. Greater than this distance, boulders were not visible or did not meet the area threshold. At Impact Crater 1, this distance was approximately 700 m and at Impact Crater 2, this distance was approximately 1 km. In total, 1794 boulders were measured at Impact Crater 1 and 4251 boulders were measured at Impact Crater 2.

Since the measurement tool in HiView only provided measurements in the north-south and east-west directions, inaccuracies in measurements occurred when the longest and shortest axes of the boulder were not orienting with these compass directions. Figure 3 shows schematics of an elongated boulder (axial ratio equals 5:3) with the longest axis oriented in the north-south direction and the same boulder oriented 45° to the east from north. In Figure 3a, the boulder is correctly measured by the simulated HiView box. In Figure 3b, the boulder is shown at the orientation of 45° from north, which created the greatest deviation from the actual measurements. In addition,

this orientation created the issue that the length and width of the box are equal, producing an axial ratio of 1. When the actual longest and shortest axes of a boulder are used to calculate the axial ratio, such as with Krishna and Kumar (2016)'s method, an axial ratio of 1 indicates an equant shaped boulder. However, as demonstrated by Figure 3b, in my method, ambiguity about the boulder shape occurred since an axial ratio of 1 also represented a boulder oriented at 45°. Figure 4 presents the variation of the semi-major axis, semi-minor axis, and boulder size as an elongated boulder is rotated through all compass directions. When the longest and shortest axes have an axial ratio of 3:1, the boulder size can be incorrect up to a factor of 1.7 (Figure 4c).

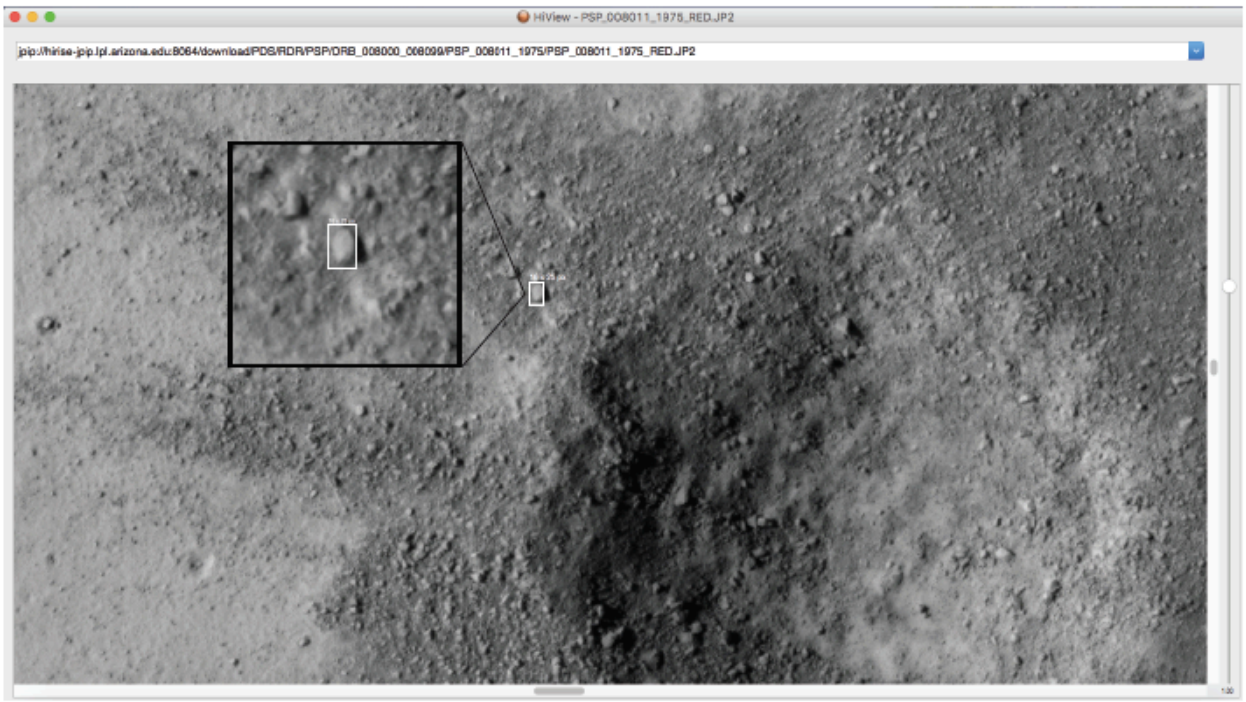


Figure 2. Example length and width measurements for a boulder at Impact Crater 1, observed in the HiRISE image PSP_008011_1975, using the program HiView. Impact Crater 1 is approximately ~175 m in diameter. Boulders were measured at the resolution of the larger image. The resolution provides distinction of individual boulders at least 1 m^2 in area while providing context of the impact crater and the surrounding ejecta blanket. North is up.

The area of each boulder was calculated using the equation for the area of a rectangle (A = length * width) in order to produce comparable results to Krishna and Kumar (2016). The areas for a circle ($A = \pi * radius^2$) and an ellipse ($A = (\pi * length * width)/4$) were also considered for

the calculations of boulder size based on the boulder shape assumptions by Mazrouei and Ghent (2017) and Watkins et al. (2017). In order to assume a circular shape for the boulders in my dataset, the lengths and widths would need to be equal for the majority of the boulders.

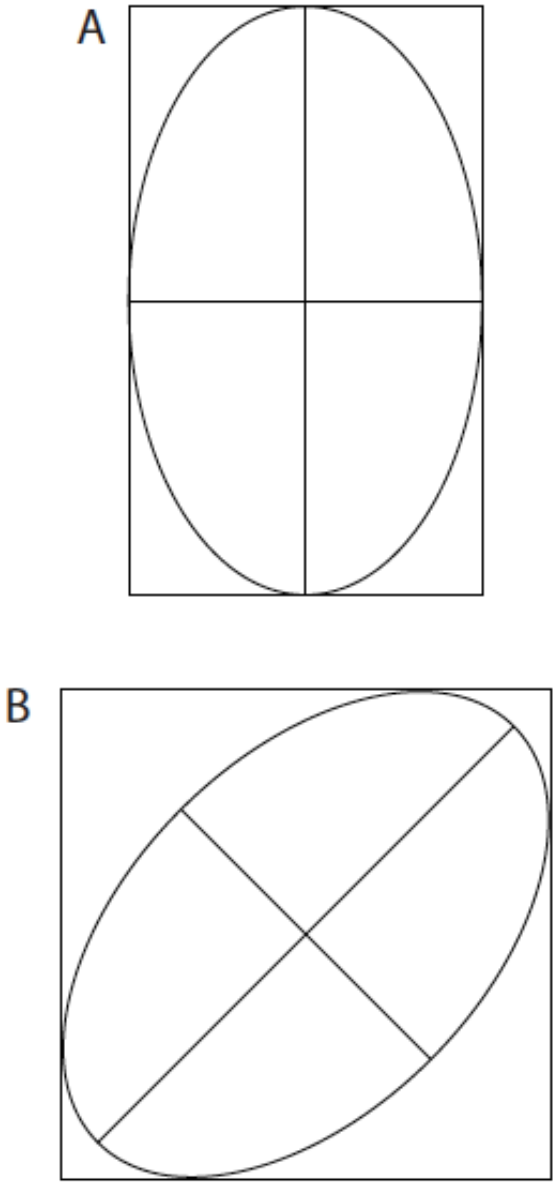
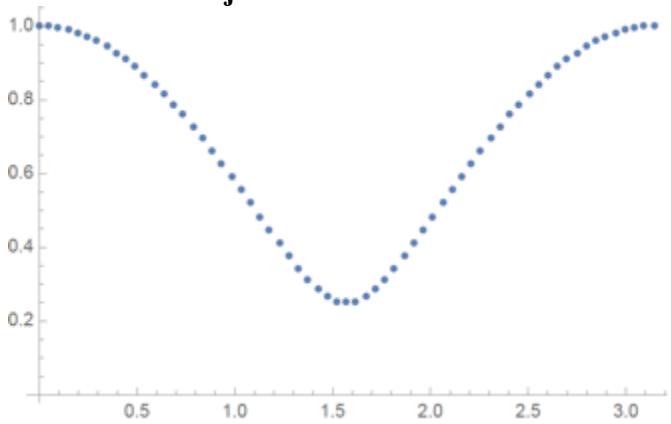
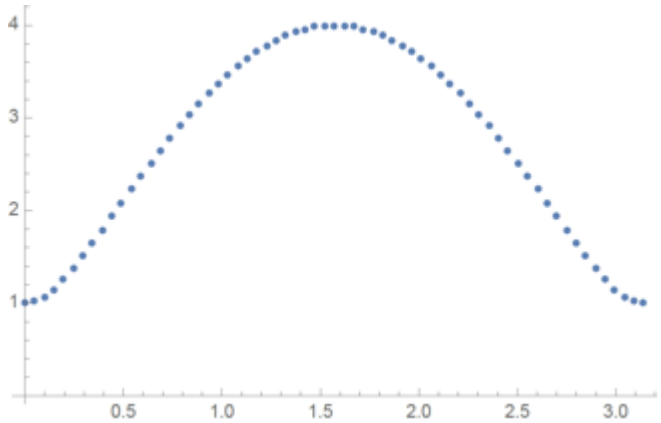


Figure 3. Schematic of measurements for a boulder oriented at north (A) and 45° to the east from north (B). The box simulates the boulder measurement using HiView. The axial ratio (longest:shortest) of the boulder is 5:3. North is up.

A. Semi-major axis



B. Semi-minor axis



C. Boulder size

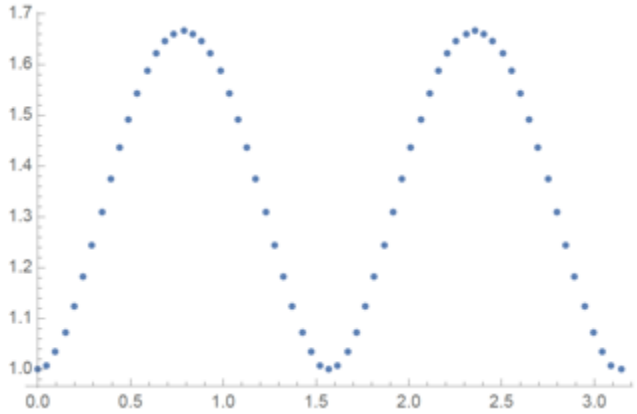


Figure 4. Figures a and b show how the semi-major and semi-minor axes measured with HiView change as a boulder is rotated through all compass directions starting at north when the axial ratio is 3:1. Figure c shows how the boulder size changes for a boulder with an axial ratio of 3:1 when rotated in the same manner as Figures a and b. Visualizing the schematics in Figure 3 on an x-y graph, the equations representing the rotation of the ellipse in a, b, and c are $x = x_0 \times cos\Theta - y \times sin\Theta$ and $y = x_0 \times sin\Theta - y \times cos\Theta$, where Θ is the ellipse's rotation.

However, equal length and width measurements occurred in only 21.8% of the boulders at Impact Crater 1 and 33.8% of the boulders at Impact Crater 2. Therefore, a circle would incorrectly estimate the shape of most boulders in my dataset. The equations for the area of an ellipse and the area of a rectangle both use the length and width as measured, with an ellipse producing an area for the boulder that is a factor of 0.115 less than that of a rectangle. The lengths and widths were also used to calculate the axial ratio of each boulder, defined as the larger measurement divided by the smaller measurement.

Lastly, the cumulative size frequency distribution and the frequency distribution were plotted for each impact crater along with power-law fits and associated slope (b-value). The b-value was calculated using the following equation:

$$N(a) = Ce^{-ab} \quad (1)$$

where $N(a)$ is the number of boulders with a size greater than a, a is the average diameter of each boulder, C is a constant equaling the total number of distinct boulders, and $-b$ is the power index (power-law slope) (M. Golombek & Rapp, 1997). This equation from Golombek and Rapp (1997) improves upon the power-law fit from Hartmann (1969) used by Krishna and Kumar (2016) by incorporating the size of the boulder through its diameter into the exponential, which creates a better fit.

Boulder area and axial ratio were both compared to the boulder distance from the crater center for the entire dataset at each impact crater as well as 16 individual angular sectors (22.5° in width) surrounding the impact crater. The rose diagram in the upper right of Figures 5, 6, 8, and 9 show the division of the angular sectors around the impact craters. Sector 1 is located at 0-22.5°, with 0° pointed north. Each subsequent sector is located clockwise to the previous sector. Similarly, the cumulative size frequency distribution and the frequency distribution were plotted for the entire

dataset and the 16 angular sectors. Evaluating these three properties for each sector is useful for determining the variation in boulder distribution across the ejecta blanket.

Previous boulder distribution analysis studies did not propagate error in a consistent or explicit manner (Krishna & Kumar, 2016; Mazrouei et al., 2014; Mazrouei & Ghent, 2017; Sholes et al., 2017; Watkins et al., 2017). In this study, I propagated error to determine how the uncertainties in length and width measurements of each boulder affected the subsequent calculations of boulder area and axial ratio as well as to serve as a precedent for future boulder distribution analyses. The error was propagated using the equation for the standard error of the function (s_m) (e.g. Karunatillake et al., 2007; Young, 1962):

$$s_m = \sqrt{\left(\Sigma \left|\frac{\partial f}{\partial x_i}\right|^2 s_{m_i x_i}^2\right)} \quad (2)$$

where *f* is the function, such as boulder area or axial ratio. The other variables are: x_i (value of the i^{th} variable of f), and s_{mx} (uncertainty of *f* and is derived from either the standard deviation or systematic error). The systematic error for each measurement was determined to be one pixel since measurements smaller than one pixel are not possible. For Impact Crater 1, the systematic error was 0.25 m, and for Impact Crater 2, the systematic error was 0.50 m.

First, I propagated the error for boulder area, where *f* is the equation for area of a rectangle (length * width):

$$s_m = \sqrt{\left(w^2\left(s_{m_l x_l}\right)^2 + l^2\left(s_{m_w x_w}\right)^2\right)} \quad (3)$$

where *l* and *w* represent the length and width respectively. In my dataset, the standard error derived from the standard deviation was less than the systematic error. Therefore, the variables s_{mlxl} and s_{mwxw} were the systematic errors described above for each crater.

Second, I propagated the error for the axial ratio, where f is the equation for axial ratio (longest axis / shortest axis):

$$s_m = \sqrt{\left(\left(\frac{1}{m_2}\right)^2 (s_{m_x})^2 + \left(-\frac{m_1}{{m_2}^2}\right)^2 (s_{m_x})^2\right)} \quad (4)$$

where m_1 represents the longest measured axis for a given boulder and m_2 represents the shortest measured axis for the same boulder. For axial ratio measurements, the standard error derived from the standard deviation was less than the systematic error, so s_{mx} is the systematic error described above.

Table 2 presents the range of values for the standard errors of the properties of boulder area and axial ratio for all measurements at Impact Craters 1 and 2. The cumulative size frequency distribution is plotted as a function of boulder diameter. Since the resolution of the image is the systematic error, the systematic error represents the uncertainty for the cumulative size frequency distribution plots.

Lastly, the point spread function was used to determine the error of the location of the boulder. This error was 3 pixels and therefore, 0.75 m at Impact Crater 1 and 1.50 m at Impact Crater 2, also presented in Table 2.

Table 2. Standard error was calculated for the boulder size and axial ratio of each boulder at Impact Craters 1 and 2 calculated using Young (1962). The error for the location was determined based on the length of 3 pixels.

	Impact Crater 1	Impact Crater 2
Block Area	0.35 - 2.75 m^2	1.06 - 10.70 m^2
Axial Ratio	0.50 - 1.29	0.71 - 1.91
Location	0.75 m	1.5 m

3. Results

Boulder distribution analysis was applied to Martian impact craters and evaluated the properties of boulder area, axial ratio, and cumulative size frequency distribution, as described in the Methods. HiRISE images of these craters allowed for viewing and measurement of distinct boulders larger than 1 m^2.

3.1. Impact Crater 1

Impact Crater 1 is located in the Tharsis region on a volcanic surface classified as Hesperian and Amazonian terrain. It is a small primary crater that is approximately 175 meters in diameter. At this crater, I measured 1794 boulders.

3.1.1. Size distribution of boulders

One key variation amongst boulders across an ejecta field is boulder size. Since measurements are only possible in two dimensions from an aerial image, the area of each boulder was calculated and represented the boulder size, instead of the volume of the boulder. At Impact Crater 1, the boulder area ranged from 1 m^2 (minimum area requirement) to 59.5 m^2. The largest boulder was located at a distance of 127.9 m from the crater center. The area of the boulders for the entire dataset decreased as a function of distance from the crater (Figure 5). The boulder farthest from the crater was 656.8 m from the crater center and was 5.1 m^2 in area. The average boulder area was 5.9 m^2, with 67.17% of the total number of boulders smaller than the mean. The best-fit line shows the decreasing trend of the data.

Variation of boulder size across the ejecta blanket is easily investigated using 16 angular sectors as shown in the rose diagram in Figure 5. This rose diagram shows the boulder population density of each sector. The lowest population density sectors were located to the east of the crater, spanning from Sector 2 (northeast) to Sector 7 (southeast). Sector 15, located opposite of Sector

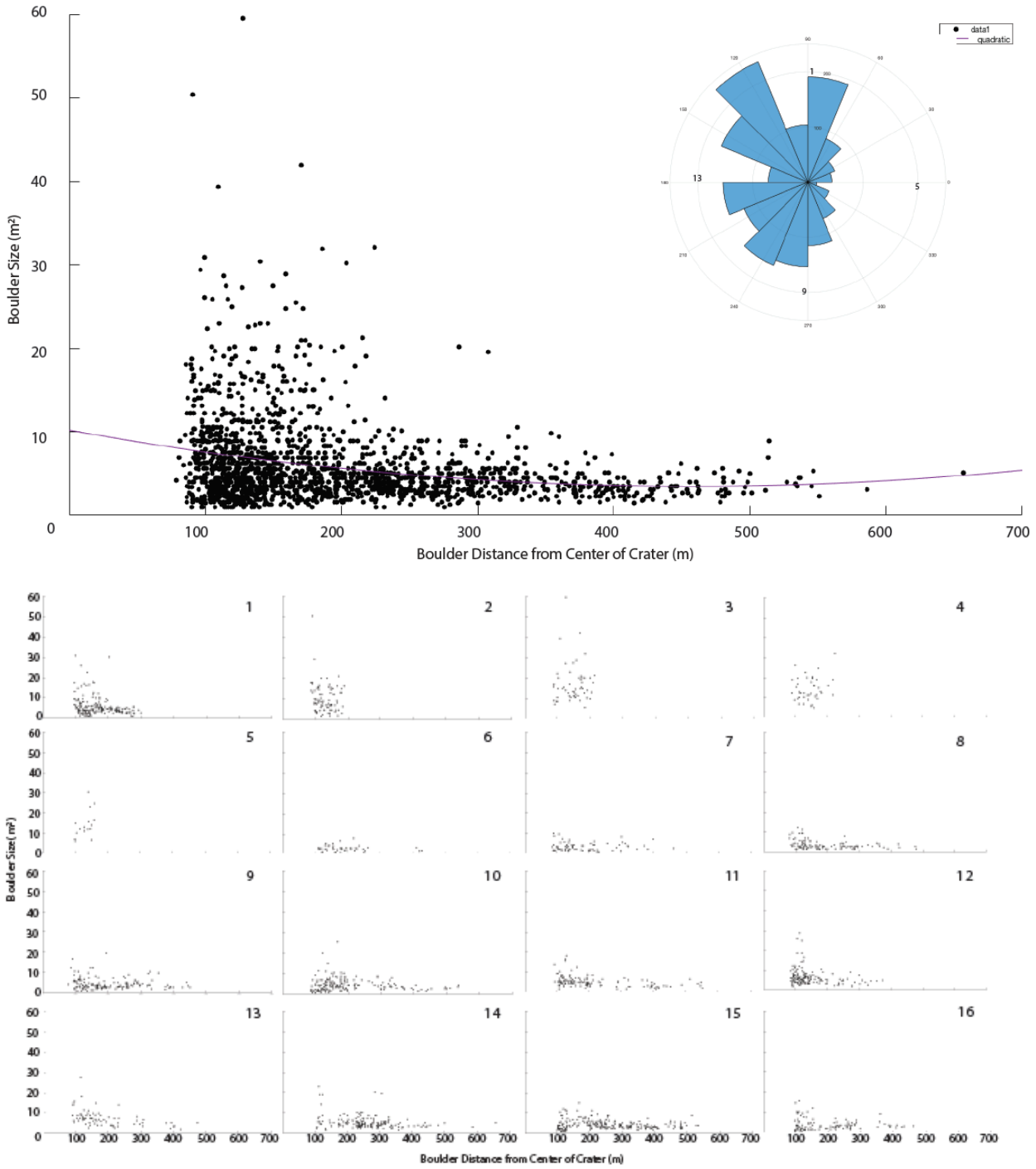


Figure 5. The top graph shows the boulder size (m^2) compared to the distance of the boulder from the crater center (m) for all boulders (n = 1794) measured at Impact Crater 1. No boulders were measured inside the crater, so there is an absence of boulders from the crater center to the distance of one radius. The 16 lower scatter plots show the same comparison within each sector. The rose diagram (upper right) shows the 16 individual sectors (22.5° in width). The population density of boulders in each sector is represented in the rose diagram by the length of the sector. Labels are listed in increments of 100 for the radial sectors. North is up for the rose diagram.

7, had the highest population density with 236 boulders. The maximum distance of a boulder from the crater center and the maximum boulder size for each sector is provided in Table 3. The boulders with the largest maximum areas were located in Sectors 1-5, with the largest boulder (59.5 m^2) located in Sector 3. Sectors 6-8 contained the boulders with smallest maximum areas. The largest maximum boulder distances from the crater were observed in Sectors 8, 10-11, and 14-15. Sector 8 also did not contain any large boulders. In the five sectors (Sectors 1-5) that contained the largest boulders, the maximum boulder distances from the crater were the smallest of all the sectors.

3.1.2. Axial ratio and shape of boulders

Table 3. The maximum distance from the crater center, maximum boulder size, maximum axial ratio, and percentage of equant shaped boulders (axial ratio = 1) for each angular sector of Impact Crater 1.

Sector	Max Distance (m)	Max Block Size (m^2)	Max Axial Ratio	Axial Ratio = 1
1	300.70	30.88	2.25	23.56%
2	186.57	50.38	2.57	14.12%
3	215.70	59.50	2.40	7.55%
4	224.19	32.06	1.60	18.18%
5	159.06	30.38	1.50	12.50%
6	428.79	8.13	2.00	23.81%
7	461.95	10.31	2.00	30.99%
8	478.16	12.19	2.14	27.83%
9	450.52	19.69	2.14	23.53%
10	535.83	25.50	1.75	22.09%
11	550.96	18.38	2.18	26.40%
12	373.92	28.69	2.14	18.18%
13	473.81	27.50	2.00	20.83%
14	656.78	23.00	2.25	22.35%
15	533.74	15.00	2.25	24.58%
16	461.74	15.94	1.80	30.77%

The axial ratio is an indicator of the two-dimensional shape of the boulder. Since my measurements do not necessarily align with the longest and shortest axes of the boulder, the axial ratio could be incorrect, as described in the Methods and Figure 4. An axial ratio of 1 in this study

represents an equant shaped boulder or an elongated boulder oriented 45° from north. Therefore, the shape of 21.8% of the boulders at Impact Crater 1 cannot be determined and are excluded from the discussion. A comparison with the axial ratios of the remaining boulders was still possible, though. Figure 6 shows the plot of axial ratio compared to the boulder distance from the crater center for Impact Crater 1. Overall, the axial ratio decreased as the distance from the crater increased. The maximum axial ratio (2.57) occurred very close to the crater rim. The best-fit line shows the decreasing trend of the data. It should be noted that in the plot comparing boulder distance and axial ratio (Figure 6), the axial ratios did not form a continuum, most likely due to length and width measurements in 0.25 m increments.

Similar to boulder size, the variation of axial ratios and shape of boulders across the ejecta could be determined using axial ratio comparisons within each sector, also shown in Figure 6. Table 3 presents the maximum axial ratio and the percentage of boulders with an axial ratio of 1.00 for each sector. The maximum axial ratio ranged from 1.50 (Sector 5) to 2.57 (Sector 2). Both of these sectors, located on the eastern side of the crater, contained a low number of boulders. The percentage of boulders with an axial ratio of 1.00 ranged from 7.6% (Sector 3) to 31.0% (Sector 7). Most sectors demonstrated only a slight decrease in axial ratio from the boulders closest to the crater rim to the farthest boulders.

3.1.3. Cumulative Size Frequency Distribution

The rose diagram in Figure 5 provides a visual representation of the boulder population density by showing the number of boulders in each sector (94,709.0 m^2 in area). The sectors to the northwest and southwest of Impact Crater 1 had the highest boulder population density, whereas the sectors to the east had the lowest boulder population density. The boulder population density is represented graphically with the cumulative size frequency distribution and frequency

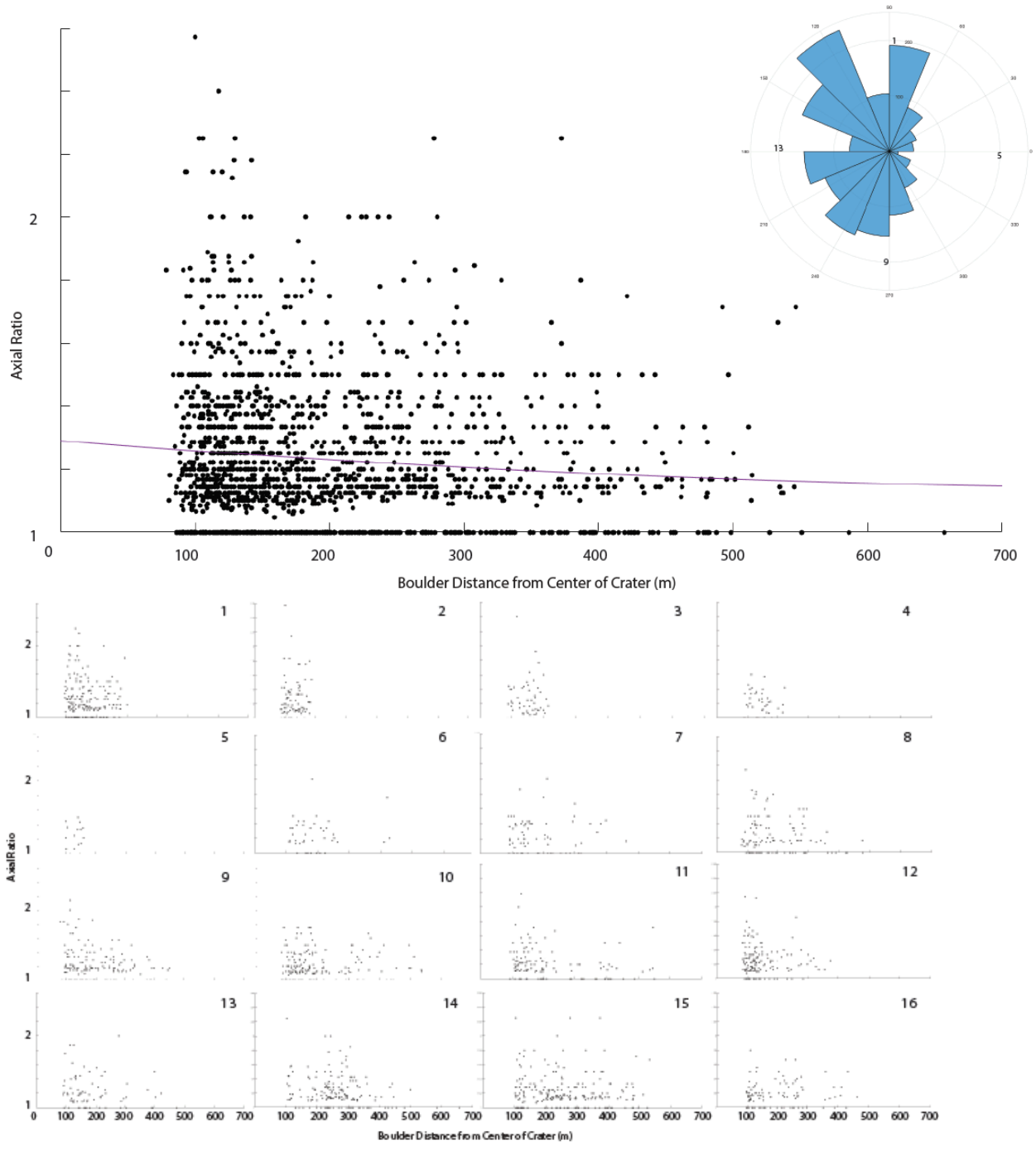


Figure 6. The top graph shows the axial ratio compared to the distance of the boulder from the crater center (m) for all the boulders (n = 1794) measured around Impact Crater 1. Axial ratio was calculated by dividing larger measurement by the shorter measurement for a given boulder. No boulders were measured inside the crater, so there is an absence of boulders from the crater center to the distance of one radius. The 16 lower plots show the same comparison. The rose diagram (upper right) shows the 16 individual sectors (22.5° in width). The population density of boulders in each sector is represented in the rose diagram by varying the length of the sector. Labels are listed in increments of 100 for the radial sectors. North is up for the rose diagram.

distribution. For Impact Crater 1, these plots, both for the entire dataset and the 16 sectors, are shown in Figure 7. The b-value, computed from the power-law slope, is presented for each sector on each graph in Figure 7 and in Table 4. At Impact Crater 1, these values ranged from -4.88 to -2.82. The b-values for each sector in Impact Crater 1 did not correlate with the population density. However, some sectors with the lowest population densities had the smallest negative b-values and some sectors with the highest population densities had the largest negative b-values, indicating a possible pattern.

3.2. Impact Crater 2

Impact Crater 2 is located in Elysium Planitia on a volcanic surface classified as late Amazonian terrain. It is a small secondary crater that is approximately 320 meters in diameter. At this crater, I measured 4251 boulders.

3.2.1. Size distribution of boulders

Similar to Impact Crater 1, boulder area, representative of boulder size, decreased from the crater rim to the outer edge of the ejecta blanket (Figure 8). The farthest boulder was located at a distance of 936.2 m from the crater center and was 8.8 m^2 in size in comparison to the largest boulder that was 221.0 m^2 in size located at a distance of 151.2 m from the crater center. The average boulder size was 16.7 m^2. More than half of the total number of boulders (58.9%) were smaller than the average boulder size. The boulder size distribution of Impact Crater 2 (Figure 8) does not have as dramatic of a decreasing trend of boulder size as Impact Crater 1 (Figure 5), as shown by the best-fit lines in both figures. Figure 8 also provides the boulder area compared to the distance from the crater center for each of the 16 angular sectors. Some of the largest maximum boulder distances from the crater center were observed in Sectors 11-13 (west to southwest of the crater). Sectors 11 and 13 also contained some of the largest boulders (Table 4), with the largest

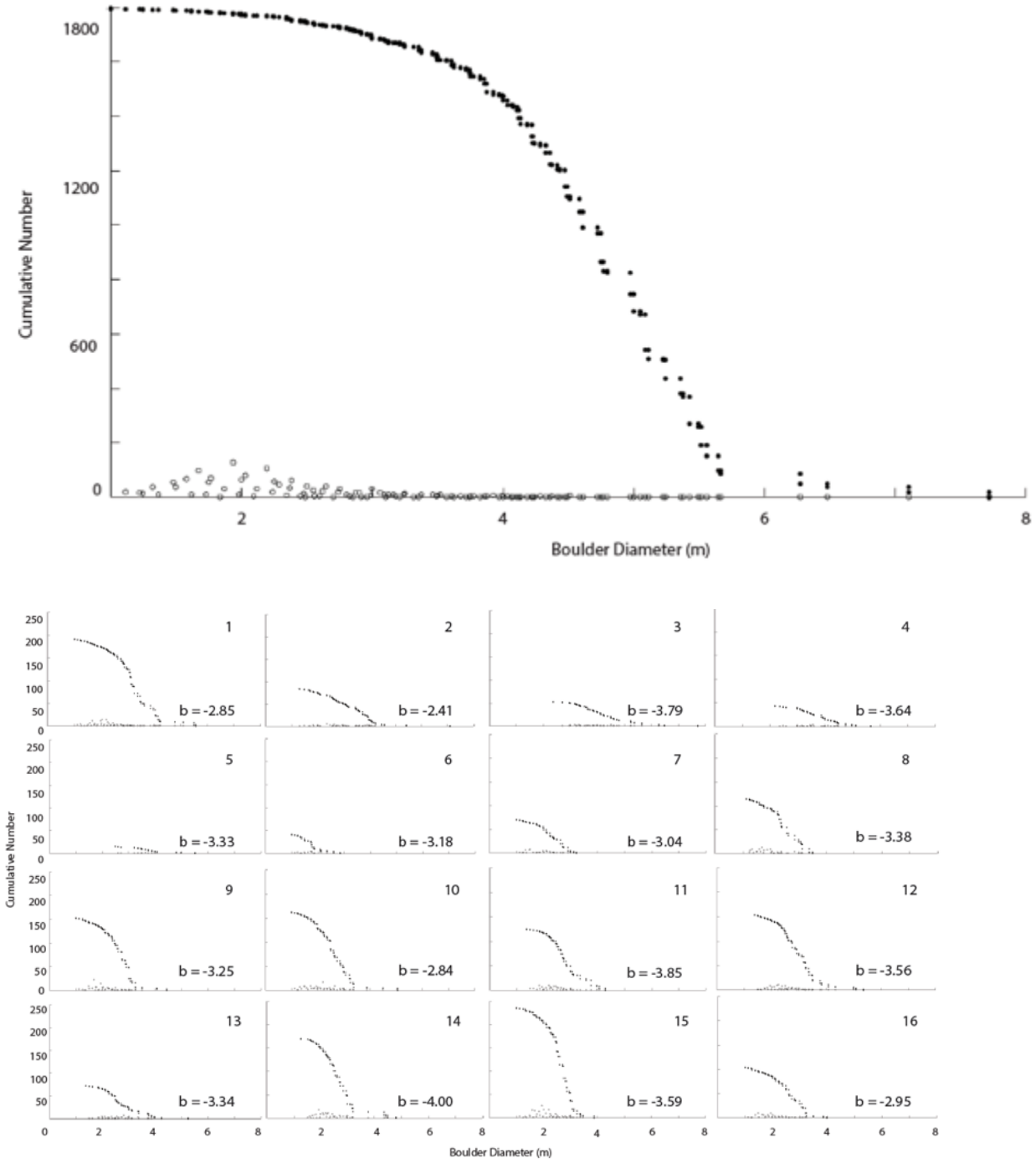


Figure 7. The top graph represents the cumulative size frequency distribution (closed circles) and frequency distribution (open circles) for Impact Crater 1. The 16 lower scatter plots provide the cumulative frequency distribution and the frequency distribution for each sector. The b-value, computed with the power-law fit for the cumulative frequency distribution, is also provided for each sector. The negative b-value for the overall dataset was -2.85.

Table 4. The b-values for each angular sector of Impact Crater 1 (Martian crater), Impact Crater 2 (Martian crater), and Censorinus Crater (lunar crater). Values from Censorinus Crater are from the study by Krishna and Kumar (2016). The overall b-value indicates the b-value for all the boulders measured at a given crater.

Sector	Impact Crater 1	Impact Crater 2	Censorinus Crater
Overall	-2.85	-3.03	-3.40
1	-2.85	-3.25	-2.68
2	-2.40	-3.15	-2.60
3	-3.79	-3.45	-2.47
4	-3.64	-2.82	-2.69
5	-3.33	-3.43	-2.98
6	-3.18	-4.88	-2.79
7	-3.04	-3.34	-3.08
8	-3.38	-3.12	-2.90
9	-3.25	-3.50	-2.55
10	-2.84	-3.30	-2.77
11	-3.85	-3.87	-3.27
12	-3.56	-3.08	-2.74
13	-3.34	-3.26	-3.14
14	-4.00	-2.63	-2.74
15	-3.59	-3.69	-2.88
16	-2.95	-2.84	-3.05

boulder (221.0 m^2) located in Sector 11. Note that the largest boulder in a sector is not necessarily the boulder that is located farthest from the crater. At Impact Crater 2, the sectors with the largest maximum boulder distances also contained the some of the largest boulders. This pattern varied from the one observed at Impact Crater 1, in which the sectors with boulders observed to the edge of the ejecta blanket did not contain any large boulders. Each sector displayed the trend that boulder size decreased as a function of boulder distance from the crater.

3.2.2. Axial ratios and shape of boulders

As with Impact Crater 1, the axial ratio was indicative of boulder shape. The same caveats for Impact Crater 1 also existed at Impact Crater 2, as previously described in the Methods. For example, axial ratios of 1 represented either equant shaped boulders or elongated shaped boulders

oriented 45° from north. Approximately 33.8% of boulders experienced this caveat, an increase from the percentage of boulders at Impact Crater 1. Although the number of boulders differed between the two impact craters and Impact Crater 2 was larger than Impact Crater 1, the maximum axial ratio at Impact Crater 2 was 2.67, a similar maximum axial ratio as Impact Crater 1. However, Impact Crater 2 only had 5 boulders with an axial ratio greater than 2.00. The mean axial ratio was 1.17, which was lower than the mean axial ratio for Impact Crater 1. Figure 9 shows the plot for the axial ratio compared to boulder distance from the crater center. As the distance from the crater rim increased, the axial ratio decreased. For boulders with an axial ratio that did not equal 1.00, this decrease demonstrated that more equant shaped boulders are located farther from the crater. The best-fit line shows the decreasing trend of the data. Similar to Impact Crater 1, the graph also displayed a discontinuity of values, most likely a result from measurements occurring in increments of 0.50 m.

Once again, the axial ratios in each sector were also plotted to determine the variation across the ejecta blanket. The axial ratio decreased slightly as a function of distance within each sector, but it was not as prominent as the decrease observed for the entire dataset. The maximum axial ratio and the percentage of boulders with axial ratios of 1 are presented for each sector in Table 5. The maximum axial ratio ranged from 1.67 (Sector 15) to 2.67 (Sectors 1 and 4). The percentage of boulders with axial ratios of 1.00 ranged from 26.2% (Sector 3) to 44.8% (Sector 6). Sector 15 contained the most boulders. Since Sector 15 had the lowest maximum axial ratio and correlated with the highest population density of boulders, Sectors 1 and 4 would have been expected to correlate with the lowest boulder population density. However, this trend was not observed in Sectors 1 and 4.

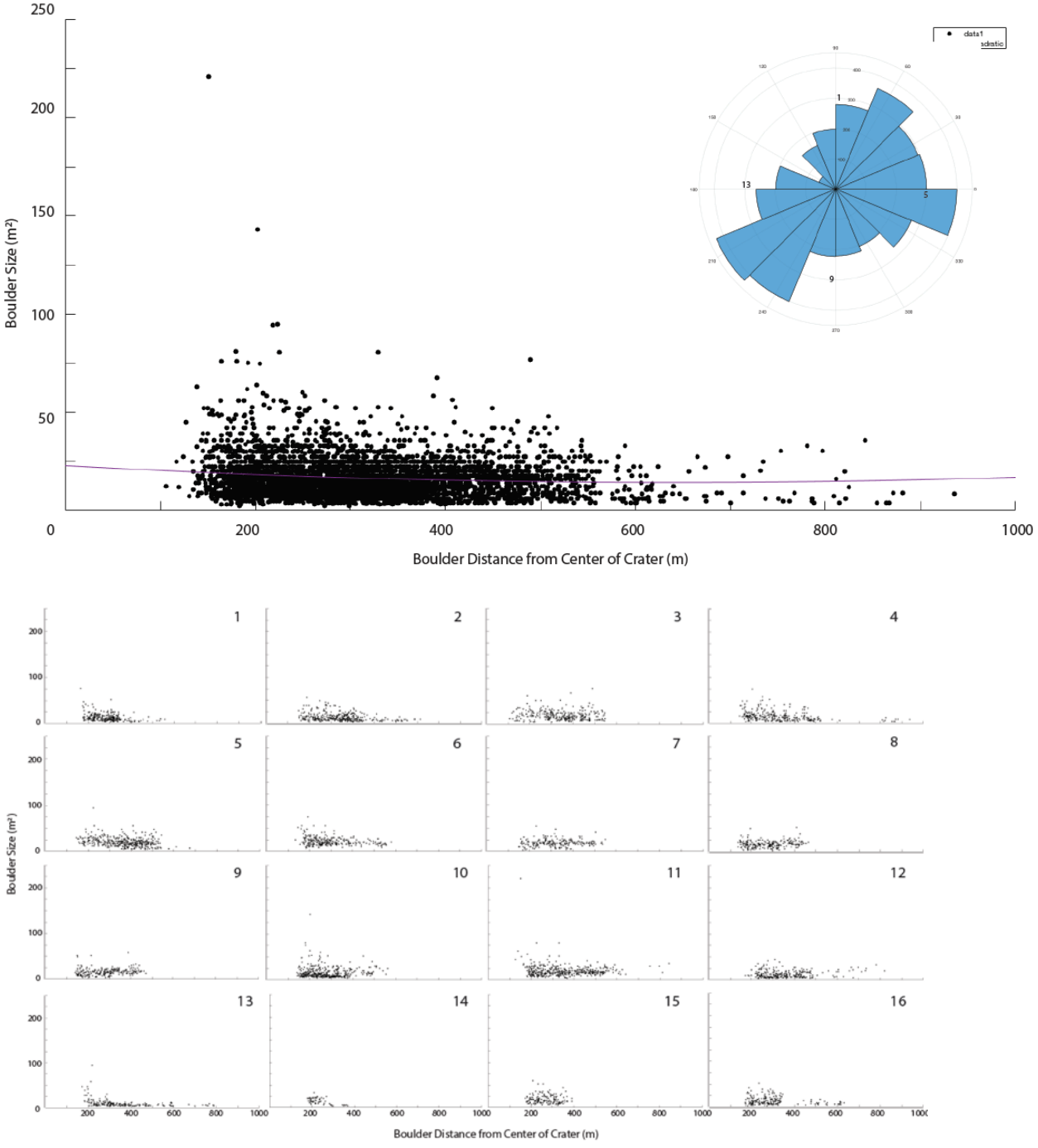


Figure 8. The top graph shows the boulder size (m^2) compared to the distance of the boulder from the crater center (m) for all of the boulders (n = 4251 boulders) measured at Impact Crater 2. No boulders were measured inside the crater, so there is an absence of boulders from the crater center to the distance of one radius. The 16 lower scatter plots show the same comparison within each sector. The rose diagram (upper right) shows the 16 individual sectors (22.5° in width). The population density of boulders in each sector is represented in the rose diagram by varying the length of the sector. Labels are listed in increments of 100 for the radial sectors. North is up for the rose diagram.

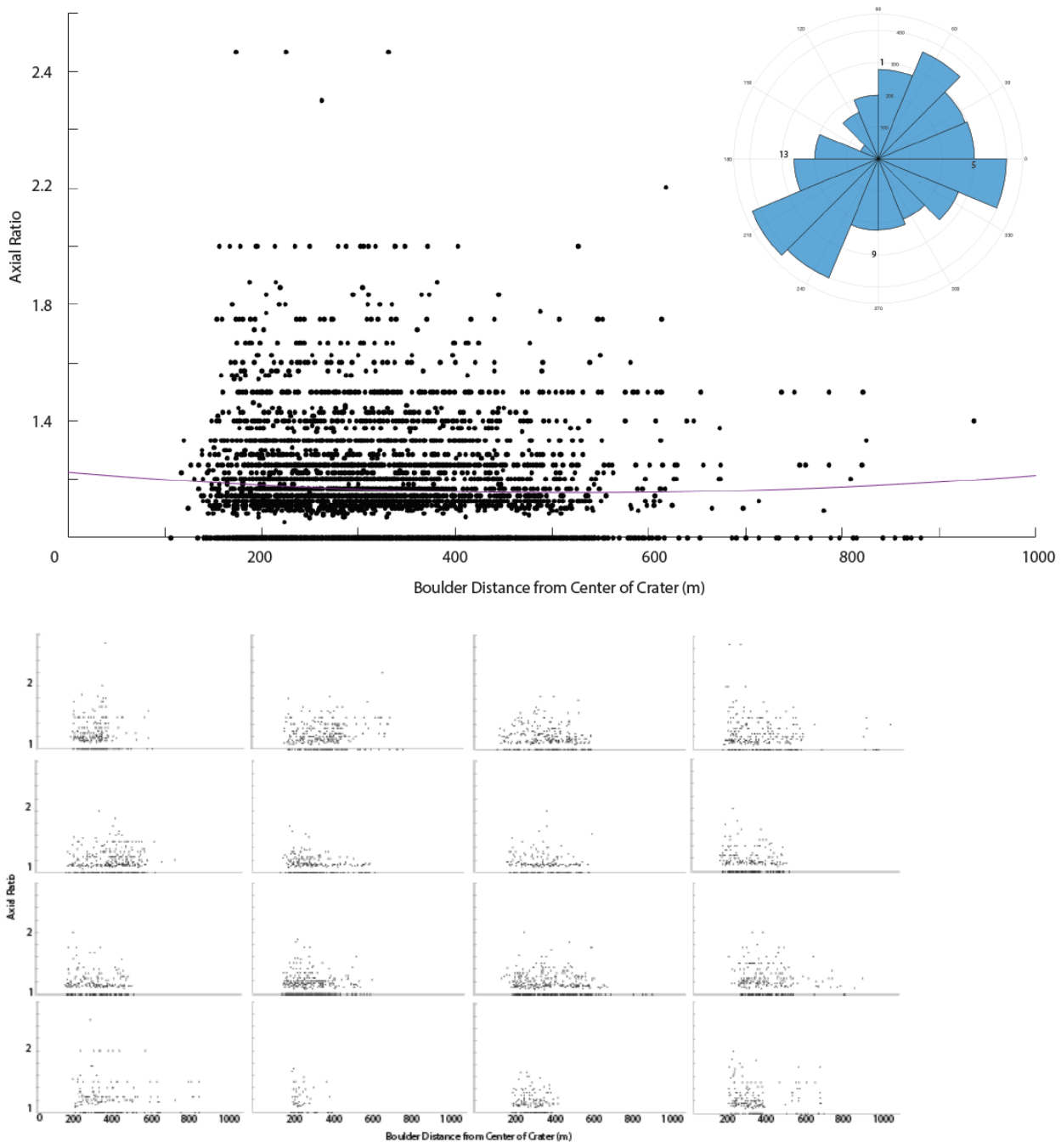


Figure 9. The top graph shows the axial ratio compared to the distance of the boulder from the crater center (m) for all the boulders (n = 4251 boulders) measured around Impact Crater 2. Axial ratio was calculated by dividing larger measurement by the shorter measurement for a given boulder. No boulders were measured inside the crater, so there is an absence of boulders from the crater center to the distance of one radius. The 16 lower plots show the same comparison within each sector. The rose diagram (upper right) shows the 16 individual sectors (22.5° in width). The population density of boulders in each sector is represented in the rose diagram by varying the length of the sector. Labels are listed in increments of 100 for the radial sectors. North is up for the rose diagram.

Table 5. The maximum distance from the crater center, maximum boulder size, maximum axial ratio, and percentage of equant shaped boulders (axial ratio = 1) for each angular sector of Impact Crater 2.

Sector	Max Distance (m)	Max Block Size (m^2)	Max Axial Ratio	Axial Ratio = 1
1	557.56	76.00	2.70	32.97%
2	713.71	56.00	2.20	30.28%
3	547.84	77.00	1.83	26.19%
4	936.21	74.75	2.67	29.00%
5	674.59	95.00	2.00	33.75%
6	579.83	75.00	1.75	44.81%
7	549.90	55.25	2.00	36.76%
8	465.34	52.50	2.00	38.01%
9	470.22	58.50	2.00	30.49%
10	562.99	143.00	1.88	41.15%
11	842.28	221.00	2.00	36.85%
12	820.26	45.00	2.00	28.63%
13	787.67	94.50	2.50	34.85%
14	368.38	33.00	1.71	35.59%
15	391.53	59.50	1.67	31.41%
16	631.50	52.00	2.00	26.26%

3.2.3. Cumulative Size Frequency Distribution

Higher boulder population densities were observed to the southwest and to the east of Impact Crater 2 and lower boulder population densities were observed to the northwest of the crater (Figure 8, rose diagram). The graphical representation of these population densities is presented in Figure 10 with the cumulative size frequency distribution and the frequency distribution. Similar to Impact Crater 1, there was not a strong correlation between the population density and the b-values. However, Sector 11, the highest boulder population density sector, had the second largest negative b-value and Sector 1, the lowest boulder population density sector, had the smallest negative b-value (Figure 10). Once again, the crater only partially exemplified the

pattern that the highest boulder population density and largest negative b-value were observed in the same sector.

4. Discussion

Boulder distribution analysis (Krishna & Kumar, 2016; Mazrouei et al., 2014; Mazrouei & Ghent, 2017; Sholes et al., 2017; Watkins et al., 2017) was applied to two Martian impact craters by measuring all boulders in the ejecta blanket and evaluating the properties of boulder area (representative of boulder size), axial ratio, and cumulative size frequency distribution.

The boulder size results from both impact craters were consistent with one of Krishna and Kumar (2016)'s major observations for Censorinus Crater on the Moon that the boulder size decreases in an ejecta blanket as the distance from the crater increases. Since the boulders were measured in two dimensions, the boulder area represents the boulder size. Boulder area ranged from 1 m^2 to 59.5 m^2 at Impact Crater 1 and 1 m^2 to 221.0 m^2 at Impact Crater 2. Despite the Martian craters having significantly smaller boulders than the lunar crater due to the size difference in the craters, the Martian craters displayed the same boulder size decrease pattern. The 16 angular sectors displayed the size-decrease pattern, also consistent with Krishna and Kumar (2016)'s observations.

For the property of axial ratio, Krishna and Kumar (2016) observed that more distal boulders at Censorinus Crater were more equant in shape (lower axial ratios) than those near the crater rim. Both Impact Crater 1 and Impact Crater 2 displayed similar trends (Figures 4 and 7). However, individual sectors around the Martian craters did not demonstrate this trend as clearly, sometimes even entirely lacking a decrease in axial ratio (Figure 4, Sector 5 and Figure 7, Sector 3).

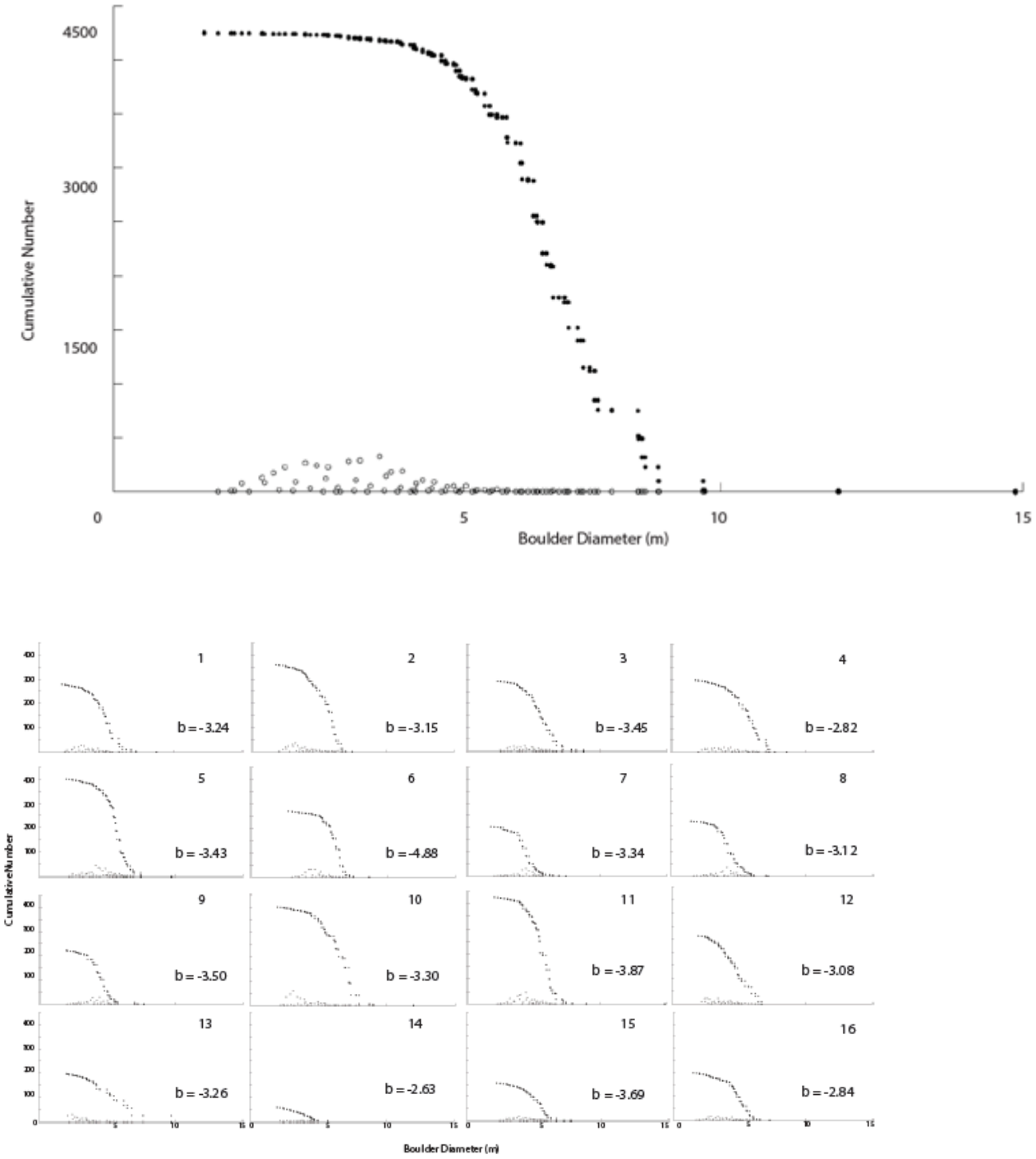


Figure 10. The top graph represents the cumulative size frequency distribution (closed circles) and frequency distribution (open circles) for Impact Crater 2. The 16 lower scatter plots provide the cumulative frequency distribution and the frequency distribution for each sector. The b-value, computed with the power-law fit for the cumulative frequency distribution, is also provided for each sector. The negative b-value for the overall dataset was -3.03.

Mechanical weathering is the dominant weathering process on Mars (Jagoutz, 2006) and has most likely affected all the boulders at each crater. Chemical weathering also occurred on Mars in the past. Since water is often a requirement for chemical weathering, this process becomes less dominant when the environment changes and water is no longer present (Gooding, 1978). Weathering could create issues with boulder distribution analysis if boulders experience different weathering rates. The Moon is not affected by the same weathering processes as Mars, but rather experiences space weathering, such as weathering from the impacts of micrometeorites (Hapke, 2001). Despite the different processes, the same decreasing trends occurred for the properties of boulder size and axial ratios were observed on both the Moon (Krishna & Kumar, 2016) and Mars (Figures 5, 6, 8, and 9). The similarities in trends were determined with visual inspection of the graphs and a best-fit on the graphs in this study. Therefore, it can be assumed that weathering on Mars does not affect the overall boulder distribution patterns.

Although potential complications associated with weathering are resolved, other complexities in my assessment arise from buried breccia and pre-impact lithology, remain. These properties cannot be interpreted from HiRISE images. The HiRISE images only reveal the visible features on the surface and do not show buried features, such as buried breccia. In addition, the HiRISE images only photograph the present surfaces and are unable to provide information about the past environments, such as the pre-impact lithology. Therefore the results in this study focus on the boulders visible in HiRISE images.

A forbidden zone, a region where ejecta is absent or nearly absent for an oblique impact, was clearly observed in the most distal uprange ejecta at Censorinus Crater (Krishna & Kumar, 2016). A figure from Kenkmann et al. (2014) shows how the direction of impact, the uprange, is affected by the impact angle at a crater with fluidized ejecta (Figure 11). An impact angle of 45-

90° produces a circular ejecta blanket with no discernable forbidden zone, whereas an impact angle of less than 35° produces a forbidden zone in the uprange direction. An impact angle of less than 15° will produce a downrange forbidden zone in addition to the uprange forbidden zone (Kenkmann et al., 2014, Figure 11). Ormö et al. (2013) indicate a similar phenomenon of an uprange forbidden zone occurs in rayed craters.

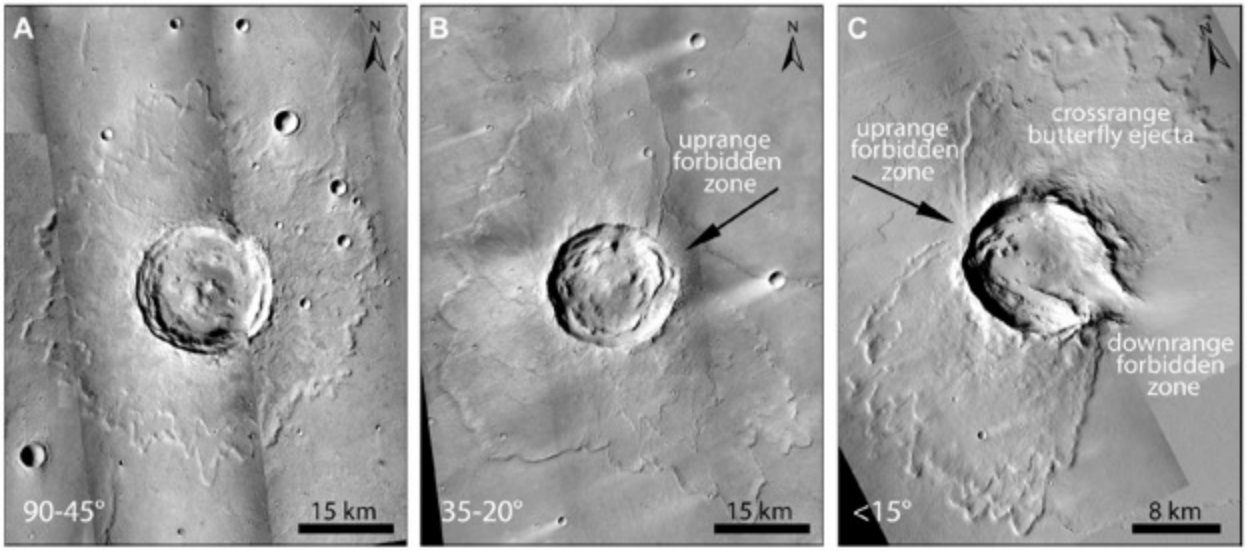


Figure 11. Examples of the typical ejecta blanket formed at varying impact angles around Martian impact craters. The uprange is the direction of the impact on the planetary surface and experiences a forbidden zone when the impact angles is less than 45° (Kenkmann et al., 2014). The forbidden zone is defined as the region where ejecta is absent or nearly absent for an oblique impact (Krishna & Kumar, 2016). The figure is from Kenkmann et al. (2014, Figure 11).

However, they note that a fully developed uprange forbidden zone occurs at impact angles lower than 20°. A figure from Ormö et al. (2013) shows the presence of a forbidden zone at a rayed crater (Figure 12). For Censorinus Crater, the uprange corresponded with the highest boulder population density. Laboratory experiments by Schultz and Eberhardy (2015) demonstrated this phenomenon by observing the vapor composition as a proxy for how the substance is distributed following the impact in the experiment at the NASA Ames Vertical Gun Range. Impact Crater 1 potentially demonstrated a forbidden zone for the sectors to the east of the crater since no boulders larger than 1 m^2 are observed beyond one crater diameter from the crater rim. These sectors with a potential

forbidden zone also contained some of the largest boulders, whereas sectors without the potential forbidden zone (boulders observed up to 4 crater diameters away) contained boulders that were relatively small, usually less than 10 m^2. At Impact Crater 2, most of the sectors contained boulders up to 2-3 crater diameters from the crater rim, which prevented identification of a forbidden zone.

At Censorinus Crater, the largest negative b-value (-3.27), computed from the power-law slope, correlated with the uprange, forbidden zone, and high boulder population density areas (Krishna & Kumar, 2016). Larger negative b-values and steeper power-law slopes within the cumulative frequency distribution may be indicative of complex or multiple fragmentation (Hartmann, 1969). Complex fragmentation occurs when particles or fragments experience extreme grinding, crushing or energy loss, whereas particles or fragments that undergo simple fragmentation experience low amounts of grinding, crushing, and energy loss (Senthil Kumar et al., 2014). For these Martian impact craters, the high boulder population density sectors do not correspond with the large negative b-values. In addition, sectors containing potential forbidden zones at Impact Crater 1 do not correlate with large negative b-value sectors. It should be noted, though, that at Impact Crater 1, some sectors with lower numbers of boulders had small negative

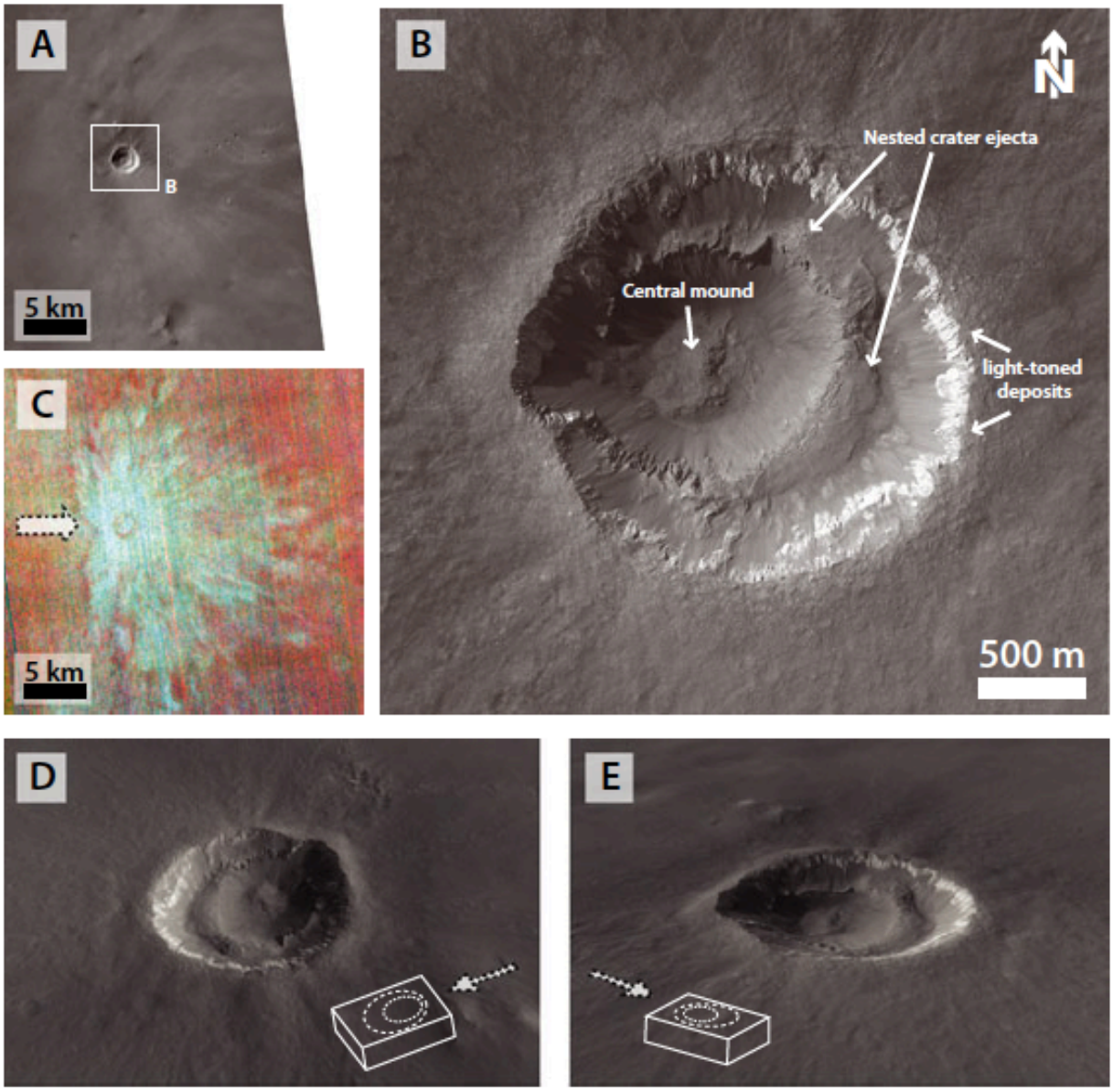


Figure 12. Example of a forbidden zone in the uprange of the impact direction. A and B) The rayed crater as observed in the MRO Context Camera (CTX) image P01_001348_1769_XI_03S003W and HiRISE image PSP_001348_1770_RED. Both of these images are viewed in the visible spectrum. C) The rayed ejecta as observed in the night-time thermal emission. A forbidden zone is visible to the west. D and E) Digital elevation models (DEMs) derived from CTX images with the white arrows indicating the impact direction. The figure is from Ormö et al. (2013, Figure 9).

b-values and some sectors with higher number of boulders had larger negative b-values. Without any correlations, though, the uprange of the impact could not be determined for either of the Martian craters.

Melosh (1984) related the maximum boulder size to the impact velocity. If the measured boulders in this study fit the theoretical model, the impact velocity of each boulder could possibly be calculated. These calculations could potentially clarify the formation mechanisms of the boulder distribution and whether the speculated secondary crater, Impact Crater 2, could have produced tertiary craters. The spallation model by Melosh (1984) could also be applied to axial ratios, but given the caveats with this study, too many uncertainties would affect the results. Krishna and Kumar (2016) observed that the most equant shaped boulders, which were located farthest from the crater, had higher ejection velocities at Censorinus Crater.

One key difference between my study and Krishna and Kumar (2016)'s study of Censorinus Crater is crater size, which resulted in a significantly greater number of boulders measured at the lunar crater and larger maximum boulder sizes. With a crater approximately 4 km in diameter, Krishna and Kumar (2016) measured nearly 242,000 boulders. In comparison, the Martian craters were only a couple hundred meters in diameter. In the ejecta blanket surrounding Impact Crater 1, 1794 boulders larger than 1 m^2 were measured, and 4251 boulders at Impact Crater 2 met the same area threshold. The differences in formation process, such as the impact velocity to form a primary crater versus the impact velocity to form a secondary impact as demonstrated in the spallation model by Melosh (1984), could account for the observed differences. I would expect Impact Crater 2, the speculated secondary crater, to have a lower impact velocity and therefore larger boulders than a primary crater of similar size (Gwendolyn D. Bart & Melosh, 2007). In addition, the lower number of boulders at the Martian craters may not fully exemplify the patterns observed at Censorinus Crater (Krishna & Kumar, 2016). The two Martian impact craters display different boulder distribution patterns, which provide a starting

point for understanding the boulder distribution differences between primary and secondary craters.

5. Conclusions

At two Martian impact craters, one in the Tharsis region (Hesperian to Amazonian terrain) and one in Elysium Planitia (late Amazonian terrain), the geomorphological properties were determined by measuring all the ejecta boulders larger than 1 m^2 surrounding these craters as observed in HiRISE images. My analysis of the boulder distribution for two Martian craters serves as a first application of the techniques used by Krishna and Kumar (2016) on Mars. The most consistent observation between my Martian impact craters and Krishna and Kumar's (2016) lunar impact crater was the decrease in boulder size as the distance increased from the crater center (Table 6). Impact Crater 1 is smaller than Impact Crater 2 and overall had smaller boulder sizes and fewer measureable boulders. Axial ratio trends revealed that the boulders farthest from the crater rim were more equant in shape (Table 6). The power-law fit from the cumulative size frequency distribution was the last property evaluated for the boulder distribution analysis. Krishna and Kumar (2016) observed that the largest negative b-value corresponded to the uprange of the impact, including a forbidden zone, and the region with higher boulder population density. However, the calculated b-values for the Martian craters did not display a similar trend, and therefore, the impact direction could not be determined. The similarities and dissimilarities between Censorinus Crater on the Moon and the Martian craters reveal potential clues about the boulder distribution patterns at primary and secondary craters (Table 6). Using the method of boulder distribution analysis to classify the type of crater would be beneficial for crater counting, an important tool for dating Martian terrain.

My observations set the foundation for future work to build a database of Martian primary and secondary craters that have undergone boulder distribution analysis. The database would not only provide comparisons between Martian craters of similar size and the same crater

classification, but it would also provide comparisons between primary and secondary craters. The craters in this database could also be compared to craters across different planetary surfaces, including the lunar craters analyzed by Krishna and Kumar (2016), Li et al. (2017b), Mazrouei and Ghent (2017), and Watkins et al. (2017).

Table 6. Boulder distribution properties of Impact Crater 1 (Martian crater), Impact Crater 2 (Martian crater), and Censorinus Crater (lunar crater). Information for Censorinus Crater from Krishna and Kumar (2016). The overall b-value indicates the b-value for all the boulders measured at a given crater.

Feature	Impact Crater 1	Impact Crater 2	Censorinus Crater
Diameter	~175 m	~320 m	3.8 km
Number of Measured Boulders	1794 boulders	4251 boulders	241,989 boulders
Boulder Size Trend	Size decreased as distance from the crater increased	Size decreased as distance from the crater increased	Size decreased as distance from the crater increased
Axial Ratio Trend*	Axial ratio decreased as distance from the crater increased	Axial ratio decreased as distance from the crater increased	Axial ratio decreased as distance from the crater increased; most prominent at this crater
B-value (overall)	-2.85	-3.03	-3.4

*Axial ratio was calculated by dividing the longest axis by the shortest axis. The perpendicular axes of each boulder at Impact Craters 1 and 2 were measured in the north-south and east-west compass directions, whereas the perpendicular axes for Censorinus Crater represented the longest and shortest axes of the boulder. The Methods describe this difference in measurements further.

References

Alpert, A. J., & Melosh, H. J. (1999). Fragment Sizes of High Speed Ejecta from a Large Impact on Europa. In *Lunar and Planetary Science Conference*.

Banks, M. (2008). PSP_008011_1975: Rayed Crater in Tharsis Region. Retrieved from http://hirise.lpl.arizona.edu/PSP_008011_1975

Bart, G. D., & Melosh, H. J. (2007). Using lunar boulders to distinguish primary from distant secondary impact craters. *Geophysical Research Letters*, *34*(7), 1–5. https://doi.org/10.1029/2007GL029306

Bart, G. D., & Melosh, H. J. (2010). Distributions of boulders ejected from lunar craters. *Icarus*, *209*(2), 337–357. https://doi.org/10.1016/j.icarus.2010.05.023

Bart, G. D., & Melosh, H. J. (2010). Impact into lunar regolith inhibits high-velocity ejection of large blocks. *Journal of Geophysical Research*, *115*(E8), E08004. https://doi.org/10.1029/2009JE003441

Bierhaus, E. B., Chapman, C. R., & Merline, W. J. (2005). Secondary craters on Europa and implications for cratered surfaces. *Nature*, *437*(7062), 1125–1127. https://doi.org/10.1038/nature04069

Bierhaus, E. B., Dones, L., Alvarellos, J. L., & Zahnle, K. (2012). The role of ejecta in the small crater populations on the mid-sized saturnian satellites. *Icarus*, *218*(1), 602–621. https://doi.org/10.1016/j.icarus.2011.12.011

Calef, F. J., Herrick, R. R., & Sharpton, V. L. (2009). Geomorphic analysis of small rayed craters on Mars: Examining primary versus secondary impacts. *Journal of Geophysical Research E: Planets*, *114*(10), 1–27. https://doi.org/10.1029/2008JE003283

Cameron, W. S., & Coyle, G. J. (1971). An analysis of the distribution of boulders in the vicinity of small lunar craters. *The Moon*, *3*(2), 159–188. https://doi.org/10.1007/BF00561907

Carr, M. H., & Head, J. W. (2010). Geologic history of Mars. *Earth and Planetary Science Letters*, *294*(3–4), 185–203. https://doi.org/10.1016/j.epsl.2009.06.042

Christensen, P. R., Jakosky, B. M., Kieffer, H. H., Malin, M. C., Mcsween, H. Y., Nealson, K., … Ravine, M. (2004). The Thermal Emission Imaging System (THEMIS) for the Mars 2001 Odyssey Mission. *Space Science Reviews*, *110*, 85–130.

Cintala, M. J., & McBride, K. M. M. (1994). Block distributions on the lunar surface: A comparison between measurements obtained from surface and orbital photography. *Lunar and Planetary Inst., The Twenty-Fifth Lunar and Planetary Science Conference*, (1), 261–262. Retrieved from http://articles.adsabs.harvard.edu/cgi-bin/nph-iarticle_query?1994LPI....25..261C&data_type=PDF_HIGH&whole_paper=YES&type=PRINTER&filetype=.pdf

Craddock, R. A., Golombek, M. P., & Howard, A. D. (2000). Analyses of rock size-frequency distributions and morphometry of modified Hawaiian lava flows: implications for future Martian landing sites [abs.]. *Lunar and Planetary Science Conference, 31st, Abstracts*, *v. 31*, abstract no. 1649, 2 p.

Di, K., Xu, B., Peng, M., Yue, Z., Liu, Z., Wan, W., … Zhou, J. (2016). Rock size-frequency distribution analysis at the Chang'E-3 landing site. *Planetary and Space Science*, *120*, 103–112. https://doi.org/10.1016/j.pss.2015.11.012

Fassett, C. I. (2016). Analysis of impact crater populations and the geochronology of planetary surfaces in the inner solar system. *Journal of Geophysical Research E: Planets*, *121*(10), 1900–1926. https://doi.org/10.1002/2016JE005094

Golombek, M. P., Warner, N. H., Ganti, V., Lamb, M. P., Parker, T. J., Fergason, R. L., & Sullivan, R. (2014). Small crater modification on Meridiani Planum and implications for erosion rates and climate change on Mars. *Journal of Geophysical Research: Planets*, *119*, 2522–2547. https://doi.org/10.1002/2014JE004658

Golombek, M., & Rapp, D. (1997). Size-frequency distributions of rocks on Mars and Earth analog sites: Implications for future landed missions. *Journal of Geophysical Research*, *102*(E2), 4117–4129. https://doi.org/10.1029/96JE03319

Gooding, J. L. (1978). *Chemical weathering on Mars thermodynamic stabilities of primary minerals (and their alteration products) from mafic igneous rocks*. *Icarus* (Vol. 33). https://doi.org/10.1016/0019-1035(78)90186-0

Hapke, B. (2001). Space weathering from Mercury to the asteroid belt. *Journal Geophysical Research*, *106*(E5), 10,039-10,073. https://doi.org/doi:10.1029/2000JE001338

Hargitai, H., & Kereszturi, A. (Eds.). (2015). *Encyclopedia of Planetary Landforms*. New York, NY: Springer. https://doi.org/10.1007/978-1-4614-9213-9

Hart, S., & Gulick, G. (2010). ESP_018352_1805: Rayed Crater in Elysium Planitia. Retrieved from http://hirise.lpl.arizona.edu/ESP_018352_1805

Hartmann, W. K. (1969). Terrestrial, lunar, and interplanetary fragmentation. *ICARUS*, *10*(2), 201–213.

Hartmann, W. K., & Neukum, G. (2001). Cratering chronology and the evolution of Mars. *Space Science Reviews*, *96*(1–4), 165–194. https://doi.org/10.1023/A:1011945222010

Jagoutz, E. (2006). Salt-induced rock fragmentation on Mars: The role of salt in the weathering of Martian rocks. *Advances in Space Research*, *38*(4), 696–700. https://doi.org/10.1016/j.asr.2005.07.070

Jones, E., Caprarelli, G., & Osinski, G. R. (2016). Insights into complex layered ejecta emplacement and subsurface stratigraphy in Chryse Planitia, Mars, through an analysis of THEMIS brightness temperature data. *Journal of Geophysical Research: Planets*, *121*(6), 986–1015. https://doi.org/10.1002/2015JE004879

Karunatillake, S., Keller, J. M., Squyres, S. W., Boynton, W. V., Brückner, J., Janes, D. M., … Newsom, H. E. (2007). Chemical compositions at Mars landing sites subject to Mars Odyssey Gamma Ray Spectrometer constraints. *Journal of Geophysical Research*, *112*, E08S90. https://doi.org/10.1029/2006JE002859

Kenkmann, T., Poelchau, M. H., & Wulf, G. (2014). Structural geology of impact craters. *Journal of Structural Geology*, *62*, 156–182. https://doi.org/10.1016/j.jsg.2014.01.015

Krishna, N., & Kumar, P. S. (2016). Impact spallation processes on the Moon: A case study from the size and shape analysis of ejecta boulders and secondary craters of Censorinus crater. *Icarus*, *264*, 274–299. https://doi.org/http://dx.doi.org/10.1016/j.icarus.2015.09.033

Li, Y., Basilevsky, A. T., Xie, M., & Ip, W.-H. (2017a). Correlations between ejecta boulder spatial density of small lunar craters and the crater age. *Planetary and Space Science*, 1–10. https://doi.org/10.1016/j.pss.2017.08.007

Li, Y., Basilevsky, A. T., Xie, M., & Ip, W. H. (2017b). Shape of boulders ejected from small lunar impact craters. *Planetary and Space Science*, *145*(June), 71–77. https://doi.org/10.1016/j.pss.2017.07.014

Lowe, D. R., & Byerly, G. R. (2015). Geologic record of partial ocean evaporation triggered by giant asteroid impacts, 3.29-3.23 billion years ago. *Geology*, *43*(6), 535–538. https://doi.org/10.1130/G36665.1

Mazrouei, S., Daly, M. G., Barnouin, O. S., Ernst, C. M., & DeSouza, I. (2014). Block distributions on Itokawa. *Icarus*, *229*, 181–189. https://doi.org/10.1016/j.icarus.2013.11.010

Mazrouei, S., & Ghent, R. R. (2017). Towards an Understanding of Initial Crater Rock Populations: Boulder Distribution around Copernicus Crater. In *Lunar and Planetary Science Conference*. The Woodlands, TX.

McEwen, A. S., & Bierhaus, E. B. (2006). The Importance of Secondary Cratering To Age Constraints on Planetary Surfaces. *Annual Review of Earth and Planetary Sciences*, *34*(1), 535–567. https://doi.org/10.1146/annurev.earth.34.031405.125018

McEwen, A. S., Preblich, B. S., Turtle, E. P., Artemieva, N. A., Golombek, M. P., Hurst, M., … Christensen, P. R. (2005). The rayed crater Zunil and interpretations of small impact craters on Mars. *ICARUS*, *176*, 351–381. https://doi.org/10.1016/j.icarus.2005.02.009

McEwen, A. S., Eliason, E. M., Bergstrom, J. W., Bridges, N. T., Hansen, C. J., Delamere, W. A., … Weitz, C. M. (2007). Mars Reconnaissance Orbiter's High Resolution Imaging Science Experiment (HiRISE). *Journal of Geophysical Research E: Planets*, *112*, 1–40. https://doi.org/10.1029/2005JE002605

Mcgetchin, T. R., Settle, M., & Head, J. W. (1973). Radial thickness variation in impact crater ejecta - Implications for lunar basin deposits, *20*, 226–236. https://doi.org/10.1016/0012-821X(73)90162-3

Melosh, H. J. (1984). Impact ejection, spallation, and the origin of meteorites. *Icarus*, *59*(2), 234–260. https://doi.org/10.1016/0019-1035(84)90026-5

Milton, D. J., & Michel, F. C. (1977). *Structure of a ray crater at Henbury, Northern Territory, Australia in Meteorite Craters, Benchmark Papers in Geology, vol. 36*. (G. J. H. McCall, Ed.), *US Geological Survey Professional Paper*. Hutchinson and Ross Inc.

Mouginis-mark, P. J., & Garbeil, H. (2007). Crater geometry and ejecta thickness of the Martian impact crater Tooting. *Meteoritics and Planetary Science*, *42*(9), 1615–1625. https://doi.org/10.1111/j.1945-5100.2007.tb00594.x

Orloff, T. C., Kreslavsky, M. A., & Asphaug, E. I. (2013). Possible mechanism of boulder clustering on Mars. *Icarus*, *225*(2), 992–999. https://doi.org/10.1016/j.icarus.2013.01.002

Ormö, J., Rossi, A. P., & Housen, K. R. (2013). A new method to determine the direction of impact: Asymmetry of concentric impact craters as observed in the field (Lockne), on Mars, in experiments, and simulations. *Meteoritics and Planetary Science*, *48*(3), 403–419. https://doi.org/10.1111/maps.12065

Osinski, G. R., Tornabene, L. L., & Grieve, R. A. F. (2011). Impact ejecta emplacement on terrestrial planets. *Earth and Planetary Science Letters*, *310*(3–4), 167–181. https://doi.org/10.1016/j.epsl.2011.08.012

Pajola, M., Rossato, S., Baratti, E., Pozzobon, R., Quantin, C., Carter, J., & Thollot, P. (2017). Boulder abundances and size-frequency distributions on Oxia Planum-Mars: Scientific implications for the 2020 ESA ExoMars rover. *Icarus*, *296*, 1339–1351. https://doi.org/10.1016/j.icarus.2017.05.011

Pajola, M., Vincent, J.-B., Güttler, C., Lee, J.-C., Bertini, I., Massironi, M., … Tubiana, C. (2015). Size-frequency distribution of boulders ≥7 m on comet 67P/Churyumov-Gerasimenko. *Astronomy and Astrophysics*, *583*, A37. https://doi.org/10.1051/0004-6361/201525975

Preblich, B. S., McEwen, A. S., & Studer, D. M. (2007). Mapping rays and secondary craters from the Martian crater Zunil. *Journal of Geophysical Research E: Planets*, *112*(5), 1–18. https://doi.org/10.1029/2006JE002817

Robbins, S. J., Antonenko, I., Kirchoff, M. R., Chapman, C. R., Fassett, C. I., Herrick, R. R., … Gay, P. L. (2014). The variability of crater identification among expert and community crater analysts. *Icarus*, *234*, 109–131. https://doi.org/10.1016/j.icarus.2014.02.022

Robbins, S. J., & Hynek, B. M. (2011a). Distant secondary craters from Lyot crater, Mars, and implications for surface ages of planetary bodies. *Geophysical Research Letters*, *38*(5), 1–5. https://doi.org/10.1029/2010GL046450

Robbins, S. J., & Hynek, B. M. (2011b). Secondary crater fields from 24 large primary craters on Mars: Insights into nearby secondary crater production. *Journal of Geophysical Research E: Planets*, *116*(10), 1–13. https://doi.org/10.1029/2011JE003820

Robbins, S. J., & Hynek, B. M. (2014). The secondary crater population of Mars. *Earth and Planetary Science Letters*, *400*, 66–76. https://doi.org/10.1016/j.epsl.2014.05.005

Robbins, S. J., Watters, W. A., Chappelow, J. E., Bray, V. J., Daubar, I. J., Craddock, R. A., … Weaver, B. P. (2017). Measuring impact crater depth throughout the solar system. *Meteoritics & Planetary Science*, *44*. https://doi.org/10.1111/maps.12956

Schultz, P. H., & Eberhardy, C. A. (2015). Spectral probing of impact-generated vapor in laboratory experiments. *Icarus*, *248*, 448–462. https://doi.org/10.1016/j.icarus.2014.10.041

Senthil Kumar, P., Prasanna Lakshmi, K. J., Krishna, N., Menon, R., Sruthi, U., Keerthi, V., … Sen, M. K. (2014). Impact fragmentation of Lonar Crater, India: Implications for impact cratering processes in basalt. *Journal of Geophysical Research E: Planets*, *119*(9), 2029–2059. https://doi.org/10.1002/2013JE004543

Sholes, S. F., Mushkin, A., & Catling, D. C. (2017). Boulder-Size Distributions as Indicators for Deposition Processes on Earth and Mars. In *GSA Annual Meeting*. Seattle.

Singer, K. N., McKinnon, W. B., & Nowicki, L. T. (2013). Secondary craters from large impacts on Europa and Ganymede: Ejecta size-velocity distributions on icy worlds, and the scaling of ejected blocks. *Icarus*, *226*(1), 865–884. https://doi.org/10.1016/j.icarus.2013.06.034

Tanaka, K. L., Skinner, J. A., Dohm, J. M., Irwin, R. P., Kolb, E. J., Fortezzo, C. M., … Hare, T. M. (2014). *Geologic Map of Mars*. *U.S. Geological Survey Geologic Investigations*. https://doi.org/10.3133/sim3292

Tanaka, K. L., Robbins, S. J., Fortezzo, C. M., Skinner, J. A., & Hare, T. M. (2014). The digital global geologic map of Mars: Chronostratigraphic ages, topographic and crater morphologic characteristics, and updated resurfacing history. *Planetary and Space Science*, *95*, 11–24. https://doi.org/10.1016/j.pss.2013.03.006

Thomas, P. C., Veverka, J., Sullivan, R., Simonelli, D. P., Malin, M. C., Caplinger, M., … James, P. B. (2000). Phobos: Regolith and ejecta blocks investigated with Mars Orbiter Camera images. *Journal of Geophysical Research-Planets*, *105*(E6), 15091–15106. https://doi.org/10.1029/1999JE001204

Tornabene, L. L., Moersch, J. E., McSween, H. Y., McEwen, A. S., Piatek, J. L., Milam, K. A., & Christensen, P. R. (2006). Identification of large (2-10 km) rayed craters on Mars in THEMIS thermal infrared images: Implications for possible Martian meteorite source regions. *Journal of Geophysical Research E: Planets*, *111*(10), 1–25. https://doi.org/10.1029/2005JE002600

Vickery, A. M. (1987). Variation in ejecta size with ejection velocity. *Geophysical Research Letters*, *14*(7), 726–729. https://doi.org/10.1029/GL014i007p00726

Watkins, R. N., Jolliff, B. L., Lawrence, S. J., Hayne, P. O., & Ghent, R. R. (2017). Boulder Distributions at Legacy Landing Sites: Assessing Regolith Production Rates and Landing Site Hazards. In *Lunar and Planetary Science Conference*. The Woodlands, TX.

Werner, S. C., Ivanov, B. A., & Neukum, G. (2009). Theoretical analysis of secondary cratering on Mars and an image-based study on the Cerberus Plains. *Icarus*, *200*(2), 406–417. https://doi.org/10.1016/j.icarus.2008.10.011

West, M. D., Clarke, J. D. A., Thomas, M., Pain, C. F., & Walter, M. R. (2010). The geology of Australian Mars analogue sites. *Planetary and Space Science*, *58*(4), 447–458. https://doi.org/10.1016/j.pss.2009.06.012

Xiao, Z. (2016). Size-frequency distribution of different secondary crater populations: 1. Equilibrium caused by secondary impacts. *Journal of Geophysical Research: Planets*, *121*(12), 2404–2425. https://doi.org/10.1002/2016JE005139

Xiao, Z., & Strom, R. G. (2012). Problems determining relative and absolute ages using the small crater population. *Icarus*, *220*(1), 254–267. https://doi.org/10.1016/j.icarus.2012.05.012

Young, H. (1962). *Statistical treatment of experimental data*. New York, NY: McGraw-Hill Book Company, Inc. https://doi.org/10.1007/BF02324509

Appendix A: Data Management Plan

At the completion of this thesis, all data will be available for public access. First, the data will be shared on the LSU Planetary Science Laboratory (PSL) website (http:www/lsupsl.org), which is hosted on Wix. Data products would include the spreadsheets of the measured boulders at each crater and all codes used to develop the figures in this thesis. Matlab was the primary software program used in this thesis, with the exception of Figure 4, for which Mathematica was used. Both Matlab and Mathematica allow for detailed annotations in each file. With these descriptions, the user will be able to replicate the results produced in this study. Each file will also include my perpetual email address (the.n.button@gmail.com) to facilitate indefinite data support. Multiple data repositories beyond the PSL website will be used as well to ensure indefinite data support. Through LSU, data will be archived on the LSU Digital Commons (https://digitalcommons.lsu.edu/faq.html). Lastly, the codes developed in Matlab and Mathematica will be archived on GitHub (https://github.com/nasa).

Appendix B: Raw Data

At Impact Crater 1, 1794 boulders were measured and 4251 boulders were measured at Impact Crater 2. The table below provides the raw data of these measurements. The horizontal measurement represents the measurement in the east-west direction, and the vertical measurement represents the measurement in the north-south direction. The latitude and longitude of each boulder are also provided. These measurements and locations can be used to calculate the boulder area and the axial ratio as well as the distribution of boulders around the impact craters.

The raw data does not identify the measured boulder in the corresponding HiRISE image. Although this is a caveat for others to easily replicate and compare measurements, the location (latitude and longitude) of each boulder allows for identification of the boulder in the corresponding HiRISE image.

Impact Crater 1

Horizontal	Vertical	Longitude	Latitude
3.5	3	248.748540114410	17.423015131960
3	3.25	248.748483328190	17.423023570620
3.25	2.75	248.748588164280	17.423251414370
3.25	3	248.748395964780	17.423289388320
2.75	3.75	248.748527009890	17.423069983230
2.5	2.5	248.749121081080	17.423048886590
3	3	248.749230285340	17.423183905110
2.5	2.5	248.749300176060	17.423074202560
2.25	2.5	248.749313280580	17.423348458920
1.75	2.25	248.748745418420	17.423348458920
2.5	2.5	248.749348225940	17.423331581610
2.5	2	248.749304544230	17.423289388320
2.25	2	248.748858990850	17.423715540520
3	2.75	248.749501111900	17.423445503480
3.75	2	248.749405012150	17.423276730340
2.75	2.5	248.749343857770	17.423276730340
2	1.75	248.749326385090	17.423470819460
2	2	248.749291439720	17.423462380800
2	2	248.749361330450	17.423483477440
2	2	248.749304544230	17.423521451400
2.5	2	248.749383171300	17.423124834510
2	1.75	248.749439957520	17.423154369810
3	1.75	248.749461798370	17.423112176520
1.25	2.25	248.749522952760	17.423183905110
1.75	3.5	248.749562266290	17.423200782420
2.75	1.75	248.749815620180	17.423778830450
2.5	2.5	248.747924202370	17.423496135430
2.5	3	248.748229974300	17.423175466450
1.75	2.25	248.748138242730	17.422888552100
3.25	2.25	248.747535435200	17.423069983230
2.25	1.75	248.748151347240	17.422939184050
2.5	1.5	248.748059615660	17.422934964720
1.75	1.5	248.748090192850	17.423348458920
1.5	1.25	248.748697368540	17.423453942140
3	4	248.747727634700	17.422934964720
2.75	2	248.747823734450	17.422778849560
3.25	3	248.747662112150	17.423137492490
2.75	2.25	248.747705793850	17.423112176520
1.75	1.75	248.748085824680	17.423352678250
1.75	2.25	248.747884888840	17.423605837970
1.75	1.75	248.748090192850	17.423352678250
1.75	2.25	248.748116401870	17.423428626170
1.5	1.25	248.748208133450	17.423420187510

1.75	1.75	248.747902361520	17.423103737860
2.75	1.75	248.747876152500	17.423044667260
3.25	2.75	248.747596589590	17.422833700830
4	4.75	248.747552907890	17.422580541110
2.5	2.25	248.747858679820	17.422905429420
1.5	1.5	248.748020302120	17.422998254650
2.5	3.5	248.747775684580	17.422909648750
2.25	2.5	248.749073031200	17.423188124440
2	1.75	248.748714841220	17.423103737860
2	1.75	248.748863359020	17.423065763910
1	1	248.748697368540	17.423310484970
1.75	2.25	248.749186603630	17.423209221080
1.25	2	248.749217180830	17.423230317720
1.5	1.5	248.749046822180	17.423356897580
2.25	1.5	248.749059926690	17.423192343760
1.5	1.5	248.749055558520	17.423352678250
2	1.75	248.749959769800	17.423593179990
5	3.25	248.749920456270	17.423487696770
2.5	2.25	248.750055869550	17.423517232070
2.5	2.75	248.750068974060	17.423605837970
1.5	2	248.750217491860	17.423538328710
2.75	2.75	248.750112655770	17.423167027790
2	2	248.749658366040	17.423234537050
2	1.75	248.749728256770	17.423162808460
1.75	1.25	248.749837461030	17.423205001750
1.25	1.25	248.749959769800	17.423179685780
2	2	248.749448693860	17.423761953130
1.75	3.5	248.749291439720	17.423753514480
2	3	248.749339489600	17.423618495960
2	1.25	248.749448693860	17.423669127900
1.5	1.5	248.749313280580	17.423550986700
1.25	1.25	248.749265230700	17.423635373270
2	2	248.749239021680	17.423593179990
2.25	1.25	248.749256494360	17.423555206030
1.5	1.25	248.748950722430	17.423892752320
1.25	1.25	248.749081767540	17.423804146420
1.25	1.75	248.749287071550	17.423795707760
1.5	1	248.749243389850	17.423825243060
1.5	1.75	248.749077399370	17.423348458920
1	1.25	248.749151658270	17.423280949670
1.5	1.75	248.749182235460	17.423399090870
1.25	1.25	248.748937617920	17.422989815990
1	1.25	248.748963826940	17.423264072350
1.25	1.25	248.748885199870	17.423302046310
1.25	1.25	248.748269287840	17.423061544580

1.25	1.75	248.748216869790	17.423344239600
1.5	1.5	248.748125138210	17.422947622700
1	1	248.748173188090	17.423348458920
1.5	1.5	248.748212501620	17.423344239600
2.25	1.25	248.748395964780	17.423082641220
1.5	1.5	248.748413437460	17.423002473980
0.75	0.75	248.748356651250	17.422968719350
1.5	1.5	248.748264919670	17.423065763910
1.25	0.75	248.748264919670	17.423183905110
1	1.25	248.748260551500	17.423276730340
2	1.5	248.748465855510	17.423475038780
1.5	1.25	248.748544482580	17.423475038780
3.5	2.25	248.748478960020	17.423504574080
1.5	1	248.748505169040	17.423462380800
1.25	1.25	248.748077088340	17.423280949670
1.25	1.25	248.748002829440	17.423200782420
2	2.25	248.747609694100	17.422728217610
1.75	1.25	248.747596589590	17.422951842030
1	1	248.747867416160	17.423023570620
1	1	248.747766948240	17.422833700830
1	2.25	248.747828102620	17.422614295740
1.75	2	248.747810629940	17.422681805000
1.25	1.5	248.748059615660	17.422799946200
1.75	1.75	248.748002829440	17.422821042840
2	1.25	248.747823734450	17.422939184050
2.25	1	248.748234342480	17.422947622700
1.5	1.75	248.748007197610	17.422825262170
1	1	248.747889257010	17.422913868070
1	1.75	248.747876152500	17.422964500020
1	0.75	248.748015933950	17.422918087400
1.25	1.5	248.749003140470	17.423150150480
1.5	1.25	248.748955090600	17.423044667260
1	1	248.748937617920	17.423002473980
1.25	1.25	248.748872095360	17.423019351290
1.5	1.5	248.749055558520	17.423327362280
0.75	0.75	248.748832781830	17.423407529530
1.25	1.25	248.748745418420	17.423415968180
0.75	1	248.748810940970	17.423361116910
1.25	0.75	248.748802204630	17.423390652210
0.75	0.75	248.748924513410	17.423437064830
1.25	1.75	248.749160394610	17.423411748850
1.25	1.5	248.749256494360	17.423458161470
1.25	1	248.749308912400	17.423542548040
2.25	1	248.749256494360	17.423555206030
1.75	1.75	248.749239021680	17.423593179990

1	1	248.749265230700	17.423635373270
1	1.25	248.749483639220	17.423829462390
1	1	248.749688943230	17.423660689240
1	0.75	248.749671470550	17.423922287620
1	1.25	248.749278335210	17.423795707760
1.25	0.75	248.749405012150	17.423842120380
1.5	1.75	248.749431221180	17.423766172460
1.25	2.25	248.749758833960	17.423681785890
1	0.75	248.749911719930	17.423559425360
1.75	1.75	248.749929192610	17.423445503480
1.5	1.5	248.749942297120	17.423272511010
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3.25	3.75	248.748378492100	17.423842120380
5	3.25	248.750676149750	17.423719759850
4.5	2.5	248.747701425680	17.423804146420
2.25	2.25	248.748317337710	17.423597399320
2.5	2.75	248.750518895620	17.423466600130
4.75	6.5	248.749230285340	17.423048886590
4.5	5.75	248.749732624940	17.423242975710
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3.75	4	248.750558209150	17.423542548040
3.5	5	248.749527320930	17.422951842030
2.5	3.75	248.749597211650	17.422951842030
2.75	3.5	248.749623420680	17.422913868070
4.5	3.25	248.750042765040	17.422994035320
2.75	3.75	248.750134496620	17.423048886590
2.25	2.5	248.748863359020	17.423217659740
3.25	3	248.749806883840	17.423331581610
2	2.5	248.749776306640	17.423453942140
3.75	2.5	248.750278646240	17.423470819460
2.5	2.75	248.750226228200	17.423323142950
2	2.25	248.750435900380	17.423458161470
1	1.75	248.750409691360	17.423449722810
2.25	2	248.750641204390	17.423686005220
3	3	248.750536368300	17.423774611120
3.5	4.5	248.749444325690	17.423344239600
3.25	5.25	248.749435589350	17.423470819460
2.75	6	248.749282703380	17.423774611120
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2.5	2	248.747924202370	17.423770391790
3.25	2.5	248.747849943480	17.423956042250
2.5	2	248.748522641720	17.423791488430

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3.5	3.75	248.749317648750	17.423002473980
2.5	3.5	248.749426853010	17.423074202560
6.5	3.5	248.749632157020	17.423622715290
3	3.5	248.748391596610	17.423074202560
3	2.5	248.749841829200	17.422960280690
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1.5	2	248.749920456270	17.422930745390
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2.5	1.75	248.749806883840	17.422867455460
2	2.25	248.749955401630	17.423331581610
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2.25	2.5	248.750322327950	17.423331581610
2.5	2.75	248.750357273310	17.423268291680
2.25	2	248.750042765040	17.423323142950
2.5	3	248.749186603630	17.423356897580
2.5	3.25	248.749186603630	17.423420187510
2.25	4.25	248.749741361280	17.423107957190
2	2.25	248.749715152260	17.423099518530
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3.5	4.25	248.749300176060	17.423171247120
3.5	2.25	248.749265230700	17.423251414370
1.75	2.25	248.748732313910	17.423086860550
2	2	248.748767259270	17.423027789950
3.5	4.25	248.748675527690	17.422977158000
2.5	2.75	248.748575059770	17.423086860550
2.25	1.75	248.749597211650	17.423605837970
2.25	2.25	248.749571002630	17.423639592600
1.5	1.5	248.749544793610	17.423660689240
2	2	248.749479271050	17.423576302670
1.5	1.75	248.749431221180	17.423546767370
2.5	2.25	248.749435589350	17.423576302670
2	3.5	248.750387850500	17.423550986700
2.25	2	248.750392218680	17.423567864010
2.25	3	248.750326696120	17.423529890060
1.5	2	248.750261173560	17.423415968180
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3.5	3.25	248.749348225940	17.423449722810

2.25	2	248.749300176060	17.423420187510
3	1.75	248.747771316410	17.423183905110
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3.5	3	248.747745107390	17.422732436940
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2.25	2.5	248.747753843730	17.422639611710
2.5	3.25	248.747631534950	17.422614295740
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1.5	2.75	248.750020924190	17.423074202560
2.25	3	248.750064605890	17.423124834510
1.75	4.5	248.749933560780	17.422850578140
3	2.5	248.749754465790	17.423183905110
3.25	2.5	248.749068663030	17.423466600130
2.25	2	248.748286760520	17.423217659740
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3.75	2.75	248.750925135470	17.421192381990
3	2.25	248.751292061790	17.421567902240
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4.75	5.5	248.750746040480	17.421943422490
3.5	3.5	248.751239643740	17.422002493090
3.5	3	248.750706726950	17.422107976300
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3	3.25	248.750287382580	17.422584760440
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3.25	3.5	248.751130439480	17.422631173050
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5	3.75	248.750632468050	17.421740894710
3.5	3	248.751907973820	17.421791526650
3.25	3.5	248.751960391870	17.421960299800
2.5	2.25	248.751685197130	17.421892790540

4.75	4	248.751925446500	17.422133292270
3.5	2.75	248.751894869310	17.422352697360
4	3.75	248.751921078330	17.422487715880
4	5.25	248.751340111660	17.423361116910
4.25	3	248.751519206650	17.423453942140
3.75	2.75	248.751545415670	17.423593179990
3.75	3.5	248.751803137730	17.423673347230
3.75	4	248.751191593870	17.423660689240
3.5	3	248.751514838480	17.422648050370
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2.25	2.75	248.751728878830	17.421829500610
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3.5	2.75	248.750894558280	17.421897009870
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3.5	5	248.749968506140	17.422631173050
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1.5	1.25	248.747946043230	17.419171323560
2.25	2.25	248.748098929190	17.418989892430
1.25	1.25	248.748129506380	17.419070059680
2	2	248.748430910150	17.419217736180
1	1	248.748142610900	17.419162884910
2.25	2.25	248.749208444480	17.419302122750
1.25	0.75	248.749221549000	17.419677643000
3.25	3.75	248.749308912400	17.419551063140
1.5	2	248.749387539470	17.419504650530
2	1.5	248.749059926690	17.419589037100
2.75	2.75	248.748876463530	17.419411825300
1	1	248.748920145240	17.419340096710
2.5	1.5	248.749038085840	17.419268368120
3.5	3.5	248.748911408890	17.419892828760
1.5	1.75	248.749409380330	17.419888609430
1.25	1.25	248.749391907640	17.419610133740
1.75	1	248.749265230700	17.419297903420
1.75	2	248.749177867290	17.419293684090
0.75	1.25	248.749147290100	17.419120691620
1	1.5	248.749164762780	17.419074279000
1.5	1	248.749282703380	17.419057401690

1.75	1.5	248.748959458770	17.419196639540
1.75	1.25	248.748872095360	17.419264148790
1	1	248.748841518170	17.419053182360
1	1.25	248.749527320930	17.419247271480
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1.75	1.5	248.749077399370	17.418508888970
1.5	1.25	248.749736993110	17.418546862920
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2.25	1.25	248.749916088100	17.418264167900
1.25	1.25	248.750103919430	17.418078517440
2	2.25	248.749828724690	17.419939241380
1.5	1	248.749876774560	17.419875951450
1.25	1.25	248.749990346990	17.420074259890
1.25	1.5	248.750095183090	17.420074259890
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1.5	1.5	248.750134496620	17.419846416150
1.75	1.25	248.749933560780	17.419656546360
1.25	1.25	248.749977242480	17.419546843810
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3.25	1.75	248.750566945490	17.419762029570
1.25	1.25	248.750658677070	17.419766248900
1.5	1.5	248.750776617670	17.419707178300
2	1.75	248.750728567800	17.419635449720
1.25	1.75	248.750366009650	17.419546843810
1.5	1.25	248.750505791110	17.419416044630
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1.25	1	248.750676149750	17.419589037100
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1	1.5	248.750649940730	17.419905486750
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1.25	1.25	248.750090814910	17.418555301580
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1.5	1.5	248.750025292360	17.417306380300
1.75	1.25	248.750628099880	17.418065859460
1	1	248.750711095120	17.417846454370
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1.75	1.5	248.747640271290	17.418399186420
1.75	1.25	248.747618430440	17.418521546950

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1.5	1.75	248.748138242730	17.418394967090
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2	1.75	248.747919834200	17.418665004130
1.5	1.75	248.748077088340	17.418694539430
2.5	2.5	248.747600957760	17.418719855400
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2.25	1.5	248.747627166780	17.418998331090
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2	1.5	248.751846819430	17.418926602500
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1.25	1.25	248.752331686350	17.417892866980
1.5	1.25	248.751514838480	17.418306361190
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1.25	1.25	248.749977242480	17.418622810840
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1.5	1	248.749846197370	17.418470915010
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1.75	1.25	248.748513905380	17.418513108290
3.25	1.75	248.748478960020	17.418205097300
1.75	1.75	248.748548850750	17.418065859460
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1.5	2.5	248.747836838960	17.419124910950
2	2.25	248.747884888840	17.419183981550
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2	2.25	248.751405634220	17.415745228700
2.5	2.25	248.751693933470	17.416816938180
3.25	2.25	248.748972563280	17.417065878570
1.5	1.5	248.748880831700	17.416947737370
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1.5	1.5	248.749190971800	17.414935117600
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1.25	1.25	248.748915777060	17.414973091560
1.25	1.25	248.749177867290	17.414707273850
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2	1.5	248.750213123690	17.416555339800
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2	2	248.745914843970	17.426871598350
1.75	2.25	248.746155093340	17.426154312480
2.5	2.25	248.746120147980	17.426124777180

2	2.25	248.745167886820	17.425863178800
2.5	2.75	248.744237466520	17.425972881340
2	2	248.743726390570	17.426280892330
2.25	2.25	248.743547295590	17.426622657960
2.5	2	248.742241212620	17.426736579830
1.75	1.75	248.741210324400	17.427825166620
2	1.75	248.743429354980	17.426652193260
2.25	2.25	248.740275535920	17.428631058390
1.75	1.5	248.746705482820	17.427930649840
2.25	2	248.746561333190	17.427331505170
1.75	2	248.746290506630	17.427154293370
2	1.75	248.746224984070	17.427044590820
2.25	2.25	248.746163829680	17.426335743610
1.75	1.75	248.745670226420	17.427276653900
1.75	1.75	248.745665858250	17.427217583290
2	1.75	248.745993471040	17.427285092550
1.25	2.25	248.746006575550	17.427230241280
2	1.75	248.746229352240	17.426812527740
2.25	2	248.746190038710	17.426766115130
3	2	248.745919212140	17.426546710040
1.75	2.25	248.746775373550	17.427989720440
2.25	1.5	248.745770694340	17.426934888280
2	1.75	248.745617808380	17.427289311880
2	1.5	248.745045578050	17.428517136520
1.5	2	248.746024048230	17.428660593690
1.75	1.75	248.746338556500	17.428133177610
2.25	1.5	248.746360397350	17.428238660830
1.75	2	248.746779741720	17.427635296830
2.25	1.75	248.743870540200	17.427816727960
1.75	2	248.745508604120	17.427234460610
1.5	1.5	248.746268665770	17.427403233760
2	1.5	248.745674594590	17.427390575770
2.25	2.25	248.745949789330	17.426040390600
1.75	2.25	248.746849632440	17.426297769650
1.5	1.5	248.746692378310	17.426993958880
1.75	1.75	248.747220926930	17.427723902730
1.75	2	248.746688010140	17.428875779450
2.25	2	248.745434345220	17.428753418920
1.75	2.25	248.746058993590	17.428639497050
1.25	1.75	248.745001896340	17.426323085620
1.5	2.25	248.745958525670	17.426031951940
2	1.75	248.744115157740	17.425926468730
1.75	2	248.743870540200	17.426120557850
1.5	1.75	248.745853689580	17.425837862830
1.75	1.75	248.745779430680	17.425842082160

2	1.75	248.746058993590	17.426031951940
2	1.5	248.745893003120	17.426496078100
1.5	1.5	248.745408136200	17.426985520220
1.75	1.75	248.743678340700	17.426479200780
1.75	2	248.745713908130	17.427331505170
2	1.5	248.745595967530	17.427407453080
1.75	1.75	248.746561333190	17.425719721620
1.75	2	248.747474280820	17.425639554380
1.75	1.75	248.746976309390	17.426985520220
3	1.75	248.744180680300	17.428280854110
1.75	1.75	248.744674283560	17.428382118000
2	2	248.743975376290	17.428272415460
2	2	248.743001274280	17.427069906790
1.25	2.25	248.746360397350	17.426280892330
2.25	2.25	248.746351661010	17.425757695580
1.75	1.75	248.746251193090	17.425723940950
1.75	2	248.746609383070	17.425791450210
1.5	1.5	248.746085202620	17.427660612800
1.5	2	248.743446827670	17.426572026010
2	2	248.742983801600	17.426411691520
2.25	2.5	248.743691445210	17.427664832130
1.5	1.5	248.743700181550	17.427702806090
1.75	2.25	248.743503613880	17.426424349510
1.5	1.5	248.745307668280	17.427331505170
1.5	1.5	248.743433723150	17.427441207710
1.5	1.75	248.743267732680	17.427403233760
1.5	1.75	248.743228419140	17.427323066510
1.5	1.5	248.743521086560	17.426989739550
2	2	248.742743552220	17.427926430510

Impact Crater 2

Horizontal	Vertical	Longitude	Latitude
5.5	5.5	163.129989830710	0.516194114490
3.5	3	163.129821124660	0.516455608870
2.5	2.5	163.129989830710	0.516354385240
3	2.5	163.130141666150	0.516413432360
2.5	2	163.129660853910	0.516523091290
3	2	163.129837995260	0.516464044170
4	2	163.130091054340	0.516455608870
4	2.5	163.130344113410	0.516455608870
2	3.5	163.130268195690	0.516126632080
2	1.5	163.129635548000	0.515966361330
1.5	1.5	163.129660853910	0.516135067380
2.5	1.5	163.129854865870	0.516480914780
2	1.5	163.129888607080	0.516649620830
3.5	3.5	163.130057313130	0.516919550500
4.5	4	163.129795818750	0.517096691850
4	2.5	163.129745206940	0.517121997760
4	4.5	163.130166972060	0.517383492140
2.5	2	163.130150101450	0.516852068080
3.5	2	163.130099489640	0.517181044880
3	2.5	163.129880171770	0.517425668650
3	3.5	163.129778948150	0.517425668650
3.5	2.5	163.130006701310	0.517796821960
2	1.5	163.130074183730	0.517628115910
3.5	2.5	163.130040442520	0.517518456980
1.5	1.5	163.130276630990	0.517838998470
3	2.5	163.129964524800	0.517493151070
2	2.5	163.130959890490	0.517889610280
3	3.5	163.131002067000	0.517999269210
2.5	2.5	163.130900843370	0.518033010420
2	2	163.131018937600	0.517889610280
2	2	163.131044243510	0.517914916190
3	3	163.131069549420	0.517864304380
3	2	163.131128596530	0.517889610280
2	2	163.131204514260	0.517940222100
3.5	2.5	163.130858666860	0.517940222100
3	2	163.130782749130	0.517678727720
3.5	3.5	163.131170773050	0.516599009010
4.5	3	163.131027372900	0.517037644740
2.5	2.5	163.131440702720	0.517332880320
3	3	163.131541926350	0.517206350790
4	3	163.131466008630	0.517054515340
3	2	163.131533491050	0.516987032920
5.5	6.5	163.131820291330	0.516843632780

4	3	163.131356349700	0.516885809290
5	4.5	163.131988997380	0.516868938690
4	4	163.131803420730	0.516303773430
3.5	3.5	163.132107091620	0.516295338120
3.5	3.5	163.132132397520	0.516776150360
3.5	3	163.132495115530	0.516733973850
3	3.5	163.132107091620	0.517046080040
2.5	2	163.131879338450	0.517560633490
4	3	163.132419197810	0.517687163020
3	2.5	163.132022738590	0.517999269210
3	4	163.132216750550	0.517898045590
3.5	3	163.132469809620	0.518572869780
2.5	1.5	163.132604774460	0.518581305080
4	2.5	163.132866268830	0.517265397900
2.5	2.5	163.133347081070	0.517138868370
4	3.5	163.133659187260	0.516641185520
4.5	3.5	163.133541093030	0.516464044170
3	2.5	163.133870069820	0.516936421110
2.5	2.5	163.133498916520	0.517273833210
3	2	163.133870069820	0.517543762880
3	3	163.134468976300	0.517265397900
3.5	2.5	163.134274964340	0.517341315630
3.5	3.5	163.134975094440	0.515569902120
3.5	3.5	163.135067882770	0.515595208020
4	2.5	163.135540259700	0.515983231930
3.5	3	163.135624612730	0.516000102540
2.5	3	163.135599306820	0.515755478770
2.5	2	163.135076318070	0.515882008310
3	2.5	163.135717401060	0.515898878910
5	4.5	163.135877671800	0.516118196770
4	4	163.136400660550	0.515839831790
3.5	4.5	163.136965825810	0.514144336000
3.5	2.5	163.136712766740	0.514717936570
3	3	163.136873037490	0.514743242480
3	3	163.137505685170	0.514743242480
2.5	2	163.137429767450	0.514068418280
3	2.5	163.137396026240	0.513688829670
3	2	163.137657520610	0.513596041350
4	2.5	163.136594672510	0.513722570880
3	3	163.136096989660	0.513781618000
5	4	163.135557130310	0.513806923910
4	4.5	163.135599306820	0.513958759350
4.5	3	163.135076318070	0.513823794510
3	4	163.135000400350	0.514245559630
4	3	163.134528023410	0.513503253020

4	3.5	163.134258093740	0.513781618000
4	1.5	163.134308705550	0.514380524470
5	4.5	163.134612376440	0.515274666530
3.5	2.5	163.129002900320	0.515856702400
5.5	5	163.128496782180	0.516000102540
5.5	4	163.128640182320	0.515797655280
4.5	3.5	163.128412429150	0.516118196770
5	3	163.128496782180	0.516135067380
3.5	4	163.128530523390	0.515468678490
3	3	163.128581135200	0.515637384530
4	3.5	163.128252158410	0.515418066670
4.5	4	163.128108758260	0.515198748810
4.5	4.5	163.128361817340	0.515114395780
4	3	163.127881005100	0.516000102540
4	3	163.128024405240	0.516354385240
4	2.5	163.127889440400	0.516497785380
4	3	163.128150934780	0.517316009720
2.5	3	163.127442369370	0.516666491430
3.5	4	163.127653251930	0.516447173570
4	3	163.128049711150	0.516666491430
2.5	2.5	163.128032840540	0.516531526590
3	2.5	163.127990664030	0.517273833210
3	3	163.128193111290	0.517467845160
3.5	3.5	163.128328076130	0.518378857820
3.5	3.5	163.128252158410	0.518243892990
2.5	3.5	163.127906311010	0.518463210850
2.5	2	163.127864134490	0.517948657400
3	2.5	163.127897875700	0.517779951350
4	3.5	163.128716100040	0.518395728430
5.5	4.5	163.128648617620	0.518049881030
2.5	3	163.129306571210	0.518513822660
4	3	163.129011335620	0.517282268510
4	4.5	163.128631747010	0.516126632080
7	4.5	163.128724535340	0.516118196770
5	4.5	163.128640182320	0.515957926030
4	4.5	163.128581135200	0.515873573000
4.5	5	163.128446170360	0.515890443610
3.5	3	163.128344946730	0.516084455560
2.5	3	163.128150934780	0.515890443610
3.5	2.5	163.128125628870	0.515949490720
3.5	3.5	163.127796652070	0.516168808590
3.5	2.5	163.128091887660	0.515772349370
3	3	163.127754475560	0.515730172860
3.5	4.5	163.127813522680	0.515536160910
3	4	163.128108758260	0.515451807880

3	4.5	163.128125628870	0.515401196070
6	3.5	163.128252158410	0.515350584250
3.5	3	163.127686993140	0.515283101830
4	3	163.127872569800	0.516236291010
4	3.5	163.128429299760	0.516168808590
3	3	163.128530523390	0.516076020260
3.5	3	163.127965358120	0.514852901410
3	3	163.127897875700	0.514962560340
5	3	163.128260593710	0.515114395780
3	2.5	163.128716100040	0.516008537840
3.5	3	163.128867935480	0.515983231930
7	5	163.131423832120	0.516143502680
7	8	163.132115526920	0.516059149660
3.5	3	163.133220551540	0.516109761470
3	3	163.133110892600	0.515603643320
4.5	3.5	163.132891574740	0.515924184820
4.5	2.5	163.132486680230	0.515460243180
3	3	163.132705998090	0.515418066670
3	2	163.132596339160	0.515122831090
3	2.5	163.132554162640	0.515013172150
4	3	163.132183009340	0.514582971730
2.5	3	163.132410762500	0.514574536430
3.5	3.5	163.132115526920	0.514287736150
3	2.5	163.132731304000	0.514372089170
3	3	163.132452939020	0.514793854290
2.5	2	163.132815657020	0.515249360620
3.5	2.5	163.133094022000	0.514970995640
4	3.5	163.133161504420	0.514017806470
8	4	163.133288033960	0.513646653160
4	2.5	163.133473610610	0.513722570880
4	3.5	163.133549528330	0.513823794510
2.5	1.5	163.133608575450	0.513587606040
3.5	4	163.133853199220	0.513621347250
3.5	4.5	163.133954422850	0.514034677070
3	2	163.133768846190	0.514110594790
2	2.5	163.133684493170	0.514110594790
2.5	2	163.133785716800	0.514051547680
3	3	163.133802587400	0.513731006190
3.5	3	163.133811022710	0.513359852880
5	3	163.133861634520	0.513317676370
3.5	2	163.133861634520	0.513418900000
5	3.5	163.133642316660	0.513747876790
4.5	3	163.133608575450	0.513865971020
4	4	163.133482045910	0.514852901410
5.5	3.5	163.133929116940	0.514920383830

2.5	2	163.134030340570	0.514819160200
2.5	2	163.134148434800	0.514810724900
4	2.5	163.134468976300	0.514658889450
4	4.5	163.134283399640	0.515089089880
3.5	5	163.133802587400	0.515232490020
3.5	2.5	163.133937552240	0.515148136990
3	2	163.133819458010	0.514726371870
3	2.5	163.133920681640	0.514507054010
3	3	163.134342446760	0.514296171450
3	3	163.134587070530	0.514068418280
3.5	2.5	163.134840129600	0.514329912660
3	2.5	163.134899176720	0.514616712940
3	3.5	163.135135365190	0.514355218570
3.5	4	163.135126929890	0.514009371170
3	3.5	163.135599306820	0.514279300840
3	4.5	163.135557130310	0.515013172150
2.5	3	163.135962024830	0.514979430950
3	2	163.135953589520	0.514616712940
3.5	3	163.135751142270	0.514507054010
2	2.5	163.136113860270	0.514945689740
3.5	2	163.136139166180	0.514616712940
3	4	163.136071683760	0.514582971730
2.5	2.5	163.135700530450	0.513342982270
3.5	4	163.135734271660	0.513385158790
3	2	163.136265695710	0.513469511810
2.5	2.5	163.136679025530	0.513444205900
2	2	163.136350048740	0.513562300140
2.5	2	163.136468142970	0.513587606040
2	2	163.136358484040	0.513975629960
2	2	163.136442837060	0.513714135580
2	1.5	163.136265695710	0.513688829670
3	2	163.136021071940	0.513823794510
2.5	2	163.135902977710	0.514237124330
3	2	163.135911413010	0.514270865540
3	2.5	163.135666789240	0.513992500560
2.5	2	163.135557130310	0.514017806470
2	2.5	163.135354683050	0.513865971020
2.5	2.5	163.135354683050	0.513916582840
3	2.5	163.135236588820	0.513714135580
3	2	163.135160671100	0.513587606040
2	2	163.135177541700	0.513545429530
2.5	3	163.135692095150	0.513579170740
6	5	163.134536458720	0.513680394370
4.5	4	163.134426799780	0.513781618000
3.5	2.5	163.134916047320	0.513503253020

2.5	3	163.134502717510	0.513410464690
5	6.5	163.127349581050	0.513486382420
3.5	4	163.127619510720	0.513587606040
4	4	163.127644816630	0.513536994230
5	5.5	163.127653251930	0.513705700280
5	5.5	163.127518287090	0.513840665120
5.5	8.5	163.127425498770	0.513790053300
7	6	163.127391757560	0.513756312090
4	4	163.127307404530	0.513722570880
4	3	163.127282098630	0.513688829670
4.5	6	163.127147133790	0.513705700280
9	6.5	163.127197745600	0.513950324050
4.5	4	163.127197745600	0.514068418280
3	4.5	163.127509851790	0.514068418280
6	6.5	163.127686993140	0.513984065260
9	10.5	163.127206180900	0.514397395080
4.5	4	163.127197745600	0.514566101130
4	3.5	163.127788216770	0.514785418990
5	5	163.127467675280	0.515232490020
3.5	3.5	163.127535157700	0.515493984390
4.5	5	163.127720734350	0.515333713650
5.5	6	163.127813522680	0.515283101830
5.5	8.5	163.127931616910	0.514051547680
2.5	3	163.127948487520	0.515055348670
5	4	163.127931616910	0.515089089880
4	5.5	163.127855699190	0.515114395780
5	4	163.127788216770	0.515156572300
4.5	5.5	163.127307404530	0.516236291010
4	5	163.127341145740	0.515890443610
8	6.5	163.127906311010	0.516539961890
6	6	163.127897875700	0.516506220680
4.5	3.5	163.127805087380	0.516489350080
5.5	4.5	163.127864134490	0.516919550500
7.5	4.5	163.127872569800	0.516236291010
5.5	5.5	163.127290533930	0.516742409150
5.5	6	163.127965358120	0.517147303670
6	6.5	163.127830393280	0.517172609580
6	6	163.128243723100	0.516059149660
4	4	163.128091887660	0.516219420400
4	4	163.128058146450	0.516160373290
6.5	8	163.127982228730	0.516059149660
7	8.5	163.128792017760	0.516177243890
4	4	163.128589570500	0.516354385240
5.5	4.5	163.128564264600	0.516506220680
3.5	4	163.128471476270	0.516438738270

3.5	4	163.128631747010	0.516514655990
5	4	163.128581135200	0.516556832500
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3.5	3	163.128808888370	0.516624314920
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5.5	4.5	163.128673923530	0.517147303670
4	4.5	163.128775147160	0.516961727020
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4	4.5	163.128387123240	0.516320644030
3.5	4.5	163.128336511430	0.516371255850
4	4.5	163.128285899620	0.516396561750
4	4.5	163.128387123240	0.516489350080
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3	4.5	163.134958223840	0.516700232640
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5	3.5	163.136763378560	0.516472479480
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3.5	3	163.129146300460	0.510618379590
4	3.5	163.129365618330	0.510879873960
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3.5	3.5	163.129222218180	0.510888309270
3	3	163.129264394700	0.510913615170
3.5	3	163.129298135910	0.510997968200
3.5	3.5	163.129146300460	0.510888309270
3	3	163.129120994560	0.510854568060
2.5	2.5	163.129416230140	0.510888309270
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4.5	5	163.129660853910	0.510770215030
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3.5	3.5	163.129905477680	0.510795520940
3	3	163.129871736470	0.510795520940
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3	3	163.129576500890	0.510736473820
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4.5	5	163.129441536050	0.510550897170
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3.5	3	163.133465175310	0.518699399320
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4.5	5.5	163.128631747010	0.510213485070
5	7	163.128707664740	0.510297838100
4	7.5	163.128657052920	0.510171308560
6.5	7.5	163.128319640830	0.509673625720
6	7	163.128319640830	0.509850767070
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4.5	5	163.128564264600	0.509741108140
5.5	6	163.128555829290	0.509665190410
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6.5	6	163.128302770220	0.509538660880
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5	5	163.128716100040	0.509201248780
6.5	9	163.128496782180	0.506965893640
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6	6.5	163.127577334210	0.507379223460
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7	7.5	163.127881005100	0.509251860600
4	4.5	163.126953121830	0.507379223460
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5.5	6	163.128007534640	0.506493516700
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2	2	163.124565931240	0.512895911250

Vita

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Nicole Button completed a Bachelor of Science at Cornell University in 2012. Her major was Science of Earth Systems with a concentration in oceanography and a minor in Marine Biology.